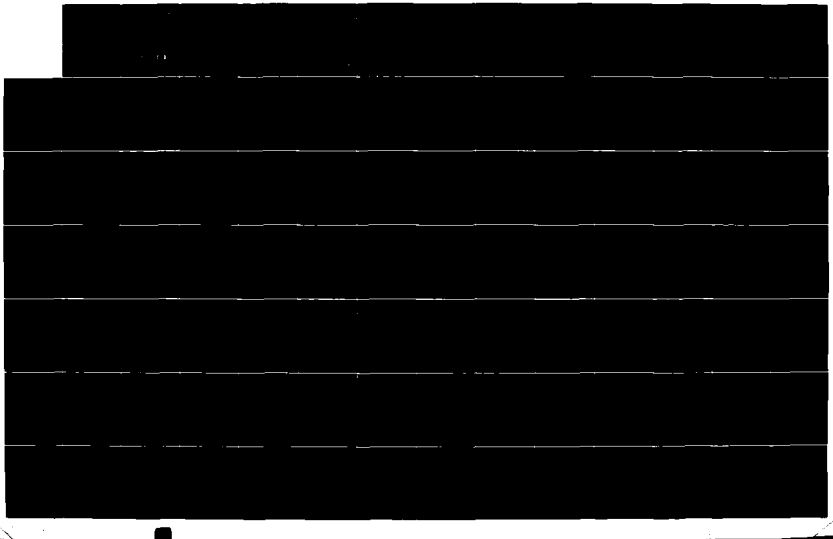
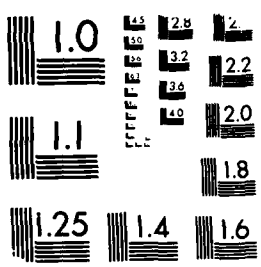
AD-A189 862 NEW YORK TRACON DEMONSTRATION OF PROGRAM RECODING REQUIREMENTS ANALYSIS DOCUMENT(U) DATA TRANSFORMATION CORP SILVER SPRING MD AUG 87 DOT/FAA/CT-87/34 1/3

UNCLASSIFIED DTFA03-85-C-00058 F/G 12/5 NL





DOT/FAA/CT-87/34

FAA Technical Center
Atlantic City International Airport
N.J. 08405

New York TRACON Demonstration of Program Recoding Requirements Analysis Document

Data Transformation Corporation
8121 Georgia Avenue
Silver Spring, Maryland 20910

August 1987

Final Report

U.S. Department of Transportation
Federal Aviation Administration

NOTICE

This document is disseminated under the sponsorship of the Department of Transportation in the interest of information exchange. The United States Government assumes no liability for the contents or use thereof.

The United States Government does not endorse products or manufacturers. Trade or manufacturer's names appear herein solely because they are considered essential to the object of this report.

Technical Report Documentation Page

1. Report No.	AD-A189 862	3. Recipient's Catalog No.
DOT/FAA/CT-87/34		

4. Title and Subtitle	5. Report Date
New York TRACON Demonstration of Program Recoding Requirements Analysis Document	August 1987
	6. Performing Organization Code: ACT-101
7. Author(s): Data Transformation Corporation	8. Performing Organization Report No.: DOT/FAA/CT-87/34
9. Performing Organization Name and Address: Federal Aviation Administration, Technical Center, Atlantic City International Airport, N.J. 08405	10. Work Unit No. (TRAIS)
	11. Contract or Grant No.: DTFA 03-85-C-0058 (16)
12. Sponsoring Agency Name and Address: Department of Transportation, Federal Aviation Administration, ATC Automation Division, Washington, D.C. 20591	13. Type of Report and Period Covered: Final Report
	14. Sponsoring Agency Code: APM-200

15. Supplementary Notes

IMB and Pailen Johnson Associates (PJA) supported the Data Transformation Corp. (DTC) in the performance of the effort.

16. Abstract

This document is an intermediate deliverable in a project whose objective was to convert portions of the current New York (N.Y.) TRACON software written in ULTRA to a higher order transportable language. A combination of ADA/PDL leading to PASCAL as the higher order language was chosen. The document consists of four main parts: (1) a detailed analysis of the N.Y. TRACON demonstration project software requirements for software version A5.04; (2) a description of the demonstration system architecture, in contrast with the current N.Y. TRACON hardware; (3) a description and rationale for the demonstration system operational software architecture; and (4) a data dictionary of the current system. The output of this document led to the next step which was the actual writing of the new software.

17. Key Words	18. Distribution Statement
New York TRACON ARTS IIIA ADA/PDL	This document is available to the U.S. public through the National Technical Information Service, Springfield, Va. 22161

19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of Pages	22. Price
UNCLASSIFIED	UNCLASSIFIED	261	

Form DOT F 1700.7 (8-72) Reproduction of completed page authorized

Preface

The New York TRACON Demonstration Requirements Analysis is on library TCDRA002.DEV.SCRIPT: the outline is called OUTLINE.

The first revision is January 14, 1987. The following changes are reflected:

- Retrack passes all interfacility messages (both input and output) to the interfacility task. The filtering of messages to process and matching of TCIDs for AM and CX messages will be performed within the interfacility task.
- Retrack will fabricate Start Track messages when processing Tracking Data messages that contain a valid ACID and none is stored for that track. This will allow the demonstration system to display full data blocks for tracks where the interfacility flight plan data was not replayed from the CDR file (because it was on the previous file).
- In CDR conversion, octal digits that will be preserved (message codes and beacon codes) will be translated to EBCDIC, for ease of use by TRACON programs. An octal to real conversion was also added. The CDR conversion rationale and package was added to the architecture section.
- The following keyboard commands are also not being recoded: ATIS, altitude filter limits, and relocating tabular lists.
- The CDR Editor will run under VM.

The second revision is May 29, 1987. The following changes are reflected:

- PSRAP sends the input sector time and target report messages to CDR extraction.
- Retrack initiates processing using either the Data Buffer Header record or the CDR Initialization record is read, whichever occurs first.
- Retrack fabricates a flight data entry keyboard entry based on the information in the Tracking Data message.
- Retrack passes interfacility FP messages to the interfacility task when the matching DA is encountered. Subsequent AM and CX messages for these flights are also sent to interfacility. All other interfacility messages are discarded and are not placed on the CDR File.
- The software architecture has been updated to reflect the system implementation in the following areas:

- Send and Receive interface
- Monitor Packages
- Load Modules
- Subtask Communication
- Primary Storage Management
- Software Clock Management

Index

EXECUTIVE SUMMARY

This document is an intermediate deliverable in a project whose objective was to convert portions of the current New York (N.Y.) TRACON software written in ULTRA to a higher order transportable language. A combination of ADA/PDL leading to PASCAL as the higher order language was chosen. The document consists of four main parts: (1) a detailed analysis of the N.Y. TRACON demonstration project software requirements for software version A5.04; (2) a description of the demonstration system architecture, in contrast with the current N.Y. TRACON hardware; (3) a description and rationale for the demonstration system operational software architecture; and (4) a data dictionary of the current system. The output of this document led to the next step which was the actual writing of the new software.

1.0 Introduction and Scope

This document consists of four parts: a detailed analysis of the New York TRACON demonstration software requirements, based on the ARTS IIIA computer program functional specifications (NAS MDs) for version A5.04; a description of the demonstration system architecture, in contrast with the current New York TRACON system architecture; a description and rationale for the demonstration system operational software architecture and the formal definitions and rules for the proposed architecture; and an appendix containing a data dictionary of the current system.

The bulk of the document contains the software requirements. They are organized by NAS MD. Each section contains an introductory paragraph, the analysis by NAS MD subsection, and a discussion of additional capabilities, if there are any. If a subsection contains a functional capability that is being converted from ULTRA to Pascal/VS, it is identified under the heading "Recoded" with a "Yes"; if the function is not a software function, or is being replaced by commercial software, or is not being considered for the demonstration, or contains administrative information only, and so on, it is identified under the "Recoded" heading with a "No." In either case, the rationale is included. Concluding the software requirements section is a section describing our approach to converting the CDR input file from Sperry-UNIVAC format to IBM S/370 format.

2.0 Applicable Documents

The following documents were used during requirements analysis: the NY TRACON Computer Program Functional Specifications (CPFS), contained in a series of nineteen volumes, the Retrack User's Guide, User's Manual for ATC Support Software (NASP-3202-01), and three volumes of the NY TRACON Coding Specifications.

The CPFS documents in the series are the following:

NAS-MD	TITLE
631	NAS En Route Stage A - NY TRACON
634	System Description and Specified Series
635	Executive Control
636	Parallel SRAP Processing
637	Target Processing (Tracking) and ISL
638	Keyboard Input Processing
639	Display Output Processing
640	Interfacility Data Transfer
641	Bulk Store Flight Plan
642	CDT Non-Executive Error and Status Messages
643	Site Adaptation
644	MSAW and Altitude Tracking
645	Non-Executive Console Teletype Processing and On Call Tasks
646	Builder - BUP and CDR Editor
647	Recovery
648	Continuous Data Recording
649	Remote Display Processing
650	Support Software
650A	Support Software Ultra Assembler
650B	Support Software Librarian
650C	Support Software Loader
650D	Support Software Utilities
650E	Support Software CONIOP
651	Conflict Alert

3.0 Software Requirements

This section outlines the major functions that will be developed for the New York TRACON demonstration. A detailed requirements analysis for each NAS-MD is included in the sections that follow.

Major Functions

The following functions are being implemented and will be traceable to the current New York TRACON code:

- Retrack
- Keyboard Operational Functions (for supported messages)
- PSRAP
- Tracking
- Data Base (for supported functions)
- CDR Editor
- Interfacility

The following functions are being implemented but are not traceable to the current New York TRACON code:

- Continuous Data Recording Extractor
- Executive Services Request Module (our implementation uses MVS/RTX and not MPE)
- Display Output (to work with the situation display)
- Test Tools (to support the build plan)
- SDL software (for custom panel support for New York TRACON)
- CDR tape conversion program (to convert the CDR tape to S/370 format and place it on a disk data set)

The following major functions are not being implemented in the New York TRACON demonstration:

- Console Data Terminal Processing

- ETG and ETG scenario generator
- On-call programs
- Keyboard Input Processing (KIP)
- Advanced Tracking (conflict alert, altitude tracking, and MSAW)
- Interfacility (Responses and ARTCC Interface)

In addition, the following functions are not being provided:

- alarm processing
- weather processing
- critical data recording and recovery processing
- bulk store FP processing
- dynamic altering of CDR categories
- consolidation of sectors
- SRAP performance monitoring
- SWABS processing
- the following multifunction keyboard commands
  - C - Configuration
  - D - Display
  - E - Emergency
  - G - BRATS
  - I - Mag Tape/Disc FP
  - K - Reinitialize Display
  - O - Auto Offset
  - Q - MSAW (Display Inhibit)
  - R - Memory Readout
  - V - MSAW (Enable/Disable)

- •• X - SWAB3
- •• 1 - CDR Extractor
- •• 2 - Manual Reconf

- remote tower display processing
- handoff

Detailed Functions and Operational Concepts

The demonstration system will be run under MVS/RTX on an IBM S/370 architecture processor. The system will appear as an MVS/RTX batch job. There will be no inputs allowed during the run. There will be an interactive job (and an interactive terminal attached to that job) ready to be initiated to execute the CDR Editor at the completion of the run.

We will convert the FAA-provided CDR tape from 7-track to 9-track format at the Tech Center. Prior to executing the online system, the FAA-provided CDR tape (in 9-track format) will be converted to S/370 format and stored in a disk data set (see section 3.21 for details on the conversion program) by an offline program.

An executive control program will be implemented, that uses MVS/RTX, to provide application services previously provided by the Multiprocessor Executive (MPE).

Control will pass to Retrack, which will drive the operational system. (See section 3.4 for the requirements analysis for Retrack.) The converted CDR data set will be read by Retrack. The Retrack program will be coded to process tracking data, keyboard data, Radar only Target reports, sector time, CDR termination, interfacility messages, target reports, and data buffer headers. Retrack will pass this input data to PSRAP, keyboard and interfacility for application processing.

The tracking programs will be recoded to provide a traceable functional equivalence with the current New York TRACON algorithms. These programs read the data provided by Retrack and perform tracking for multiple sensors, generating entries in the Central Track Store (CTS) and sending the appropriate data to the display output programs. (The demonstration will display data for only a single controller position.) (See section 3.6 for the requirements analysis for tracking.)

The keyboard operation functions (KOF) programs will be recoded to provide a traceable functional equivalence with the current New York TRACON implementation, for the supported commands. (See section 3.7 for the requirements analysis for keyboard.) These programs read the data provided by Retrack, process the messages, and send the required information to Tracking and Display for further processing.

The display output programs will be coded to support the situation display. The functions performed will be equivalent to the current functions, but, because of the difference in the display hardware interface, functional traceability will not be maintained. (See section 3.8 for the requirements analysis for display output.) The programs that support the remote displays will not be recoded.

The interfacility function will process FP, AM, and CX messages, so that an operational flight plan data base can be maintained. The remaining interfacility messages will not be processed. No interfacility output messages will be generated and the ARTCC interface will not be supported (see Section 3.9). However, the ARTCC Aircraft ID/TRACON Terminal Computer ID relationship will be maintained to process subsequent (AM and CX) messages. The interfacility input programs will pass its data to tracking.

The CDR extractor will be recoded to provide information for the CDR Editor. The points at which the extraction is performed will remain the same as the current NY TRACON system, for the functions recoded. However, the data formats will change to support the following interfaces:

- CDR extractor and PSRAP
- CDR extractor and tracking
- CDR extractor and keyboard
- CDR extractor and display
- CDR extractor and CDR editor

The CDR extractor will produce a data set which resides on an IBM 3380 disk data set. (See section 3.17 for the requirements analysis for CDR extraction.)

CDR Editor will be recoded to produce a listing that will verify the functional equivalence between the GFE system and the demonstration system, for the functions we are recoding in the operational program. The listing produced by the recoded CDR Editor will be identical to that produced by the current editor, for the functions that are supported in the operational recoding. (See section 3.15 for the requirements analysis for the CDR Editor.)

3.1 ICD En Route CCC/NY TRACON

This document (NAS-MD-631) describes the interface between the NAS En Route Stage A Central Computer Complex and the NY TRACON facility. Details of the hardware, software, and operational elements are provided.

Sub-section	Title	Recoded
1.0	INTRODUCTION	No
	This section is administrative and contains no demonstrable functions.	

Sub-section	Title	Recoded
2.0	TRANSMISSION CHARACTERISTICS	No
	This section describes the ARTCC hardware interface and, as such, contains no demonstrable functions.	

Sub-section	Title	Recoded
3.0	REQUIREMENTS AND FUNCTIONAL CAPABILITIES	No
	This section is administrative and contains no demonstrable functions.	

Sub-section	Title	Recoded
3.1	Functions	No
	This section provides an overview of the functions performed by the operational interface. Aside from this information, this section contains no demonstrable functions.	

Sub-section	Title	Recoded
3.2	Model A3d2/NY TRACON Interface	No
	This section provides an overview of the Model A3d2/NY TRACON Interface. This section contains no demonstrable functions.	

Sub-section	Title	Recoded
4.9	MESSAGES	Yes
	The following input messages are supported: Flight Plan (FP) Amendment (AM) Cancellation (CX) No other messages are supported. Refer to Section 3.9 of this document for the rationale.	

Sub-section	Title	Recoded
5.0	SUPERVISORY CONTROLS	No
	This function is not required by the FAA and is not required to maintain an integral system. Interfacility will always be enabled. Refer to Section 3.9 of this document for the rationale.	

Sub-section	Title	Recoded
6.0	REFERENCES	No
	This section is administrative and contains no demonstrable functions.	

3.2 System Description and Specification Series

This document (NAS-MD-634) contains the ARTS System Description, Program Organization and presents an overview of the NY TRACON Computer Program Functional Specifications (CPFS) series.

Sub-section	Title	Recoded
1.0	INTRODUCTION	No
	This section is administrative and contains no demonstrable functions.	

Sub-section	Title	Recoded
2.0	SYSTEM DESCRIPTION	No
	This section is administrative and contains no demonstrable functions. Note also that this section describes hardware components.	

Sub-section	Title	Recoded
2.1	System Organization	No
	This section provides an overview of the following sections and, as such, contains no demonstrable functions.	

Sub-section	Title	Recoded
2.1.1	Data Processing Subsystem	No
	The IBM central processor and software operating systems MVS and RTX comprise the Data Processing system.	

Sub-section	Title	Recoded
2.1.2	Sensor Receiver and Processor	No
	This section describes the hardware components of the SRAP. We are not using the SRAP, since all SRAP inputs have been recorded on the CDR input tape that is read by Retrack.	

Sub-section	Title	Recoded
2.1.3	Data Entry and Display Subsystem	No
	This section describes the input and output devices at the controller workstations. There will be no input capability from the data entry sets, because all inputs have been recorded on the CDR tape after KIP processing. The situation display will function as the output device for controller displays.	

Sub-section	Title	Recoded
2.1.4	Continuous Data Recording Subsystem	No
	Continuous Data Recording will be performed on the IBM processor. There will be no critical data recording. This function is not required by the FAA and is not required to maintain an integral system.	

Sub-section	Title	Recoded
2.1.5	Remote Displays	No
	This function is not required by the FAA and is not required to maintain an integral system.	

Sub-section	Title	Recoded
3.0	OPERATIONAL PROGRAM	No
	This section is administrative and contains no demonstrable functions.	

Sub-section	Title	Recoded
3.1	Program Organization	No
	This section provides the major program modules, or subprograms, and the CPFS that describes them. Aside from this information, this section contains no demonstrable functions.	

Sub-section	Title	Recoded
3.1.1	Multiprocessor Executive	No
	Refer to Section 3.3 of this document for the rationale.	

Sub-section	Title	Recoded
3.1.2	SRAP Input Processing	Yes
	Refer to Section 3.5 of this document for the rationale.	

Sub-section	Title	Recoded
3.1.3	Radar/Beacon Tracking Module	Yes
	Refer to Section 3.6 of this document for the rationale.	

Sub-section	Title	Recoded
3.1.4	Keyboard Input Module	Yes
	Refer to Section 3.7 of this document for the rationale.	

Sub-section	Title	Recoded
3.1.5	Interfacility Input/Output	Yes
	Refer to Section 3.9 of this document for the rationale.	

Sub-section	Title	Recoded
3.1.6	Bulk Store Flight Plan Input Module	No
	Refer to Section 3.10 of this document for the rationale. This function is not required by the FAA and is not required to maintain an integral system.	

Sub-section	Title	Recoded
3.1.7	Display Output Module	Yes
	Refer to Section 3.8 of this document for the rationale.	

Sub-section	Title	Recoded
3.1.8	Automatic Format Offset Module	Yes
	Refer to Section 3.8 of this document for the rationale.	

Sub-section	Title	Recoded
3.1.9	Minimum Safe Altitude Warning (MSAW)	No
	Refer to Section 3.13 of this document for the rationale. This is a priority 2 function and is not required to maintain an integral system.	

Sub-section	Title	Recoded
3.1.10	Continuous Data Recording	Yes
	Refer to Section 3.17 of this document for the rationale.	

Sub-section	Title	Recoded
3.1.11	Recovery Program	No
	Refer to Section 3.16 of this document for the rationale. This function is not required by the FAA and is not required to maintain an integral system.	

Sub-section	Title	Recoded
3.1.12	On Call Programs	No
	Refer to Section 3.14 of this document for the rationale. This function is not required by the FAA and is not required to maintain an integral system.	

Sub-section	Title	Recoded
3.1.13	RBTL Operational Functions	No
	Refer to Section 3.16 of this document for the rationale. This function is not required by the FAA and is not required to maintain an integral system.	

Sub-section	Title	Recoded
3.1.13.1	Full RBTL Operational Function	No
	Refer to Section 3.16 of this document for the rationale. This function is not required by the FAA and is not required to maintain an integral system.	

Sub-section	Title	Recoded
3.1.13.2	First Level Backup RBTL Operational Function	No
	Refer to Section 3.16 of this document for the rationale. This function is not required by the FAA and is not required to maintain an integral system.	

Sub-section	Title	Recoded
3.1.13.3	Second Level Backup RBTL Operational Function	No
	Refer to Section 3.16 of this document for the rationale. This function is not required by the FAA and is not required to maintain an integral system.	

Sub-section	Title	Recoded
3.1.14	Conflict Alert (CA) Module	No
	Refer to Section 3.20 of this document for the rationale. This function is not required by the FAA and is not required to maintain an integral system.	

Sub-section	Title	Recoded
4.0	ORGANIZATION OF THE CPFS	No
	This section is administrative and contains no demonstrable functions.	

Sub-section	Title	Recoded
5.0	GLOSSARY OF TERMS	No
	This section provides technical content but contains no demonstrable functions.	

Sub-section	Title	Recoded
6.0	ACRONYMS AND ABBREVIATIONS	No
	This section provides technical content but contains no demonstrable functions.	

Subsection	Title	Recorded
7.0	ADDITIONAL REFERENCE DOCUMENTS	No
	This section is administrative and contains no demonstrable functions.	

3.3 Multiprocessor Executive

This document (NAS-MD-635) specifies the functional requirements for the Multiprocessor Executive (MPE).

The functions performed by the MPE in the NY TRACON system are performed in the demonstration system by MVS/RTX or are not part of the TRACON Recode project. This section will map categories of MPE work to MVS/RTX services and identify those that will not be re-implemented.

Critical Data Recording and the Recovery Sequence that uses the Critical Data will not be recoded. The equivalent of a scatter interrupt will not exist on the demonstration system.

The initializer module used during preset operation will not be recoded. Offline builds of the load modules to be executed under MVS/RTX will be performed. Task set up will be performed as part of the initialization of the RTX system.

The NY TRACON normal mode MPE services are :

1) Interrupt Control
2) Scheduler
3) Executive Service Request Module
4) Debug Module

Interrupt Control processes the following categories of interrupts:

- Interprocessor - Since the recode is on a uniprocessor, interrupts of this type will not occur.

- Executive Controlled I/O interrupts. I/O processing is handled by MVS standard access methods. Included in the Job Control Language that is used to setup the RTX job, will be information about input and output files. MVS will use this information to set up control blocks that describe the characteristics of the files. Pascal/VS will use the control blocks to generate calls to the proper MVS access methods.

The MPE scheduler schedules planned tasks and popup tasks. Planned tasks are scheduled through a lattice which imbeds strict predecessor/successor rules. RTX will schedule a subtask when a Work Request is sent to the subtask from another subtask. Subtask successor rules for each type of work will be imbedded in the logic of the subtask. The execution sequence within a subtask is determined by logic within the subtask.

Popup tasks are aperiodic and are executed on the basis of an associated real time value. RTX time queuing will be used when time related scheduling is required.

The Executive Services Module processes ESRs, critical data requests and executive input messages. It also prints recovery variables and provides device handlers.

The recoded system will use MVS standard I/O routines and will not perform critical data processing or print recovery variables. It will not process EX (Executive) Operator messages. Individual ESRs are covered in the following sub-sections.

Sub-section	Title	Recoded
1.0	INTRODUCTION	No
	This section is administrative and contains no demonstrable functions.	

Sub-section	Title	Recoded
2.0	EXECUTIVE SERVICES MODULE	No
	This section provides technical content but contains no demonstrable functions.	

Sub-section	Title	Recoded
2.1	Device Handlers	No
	This section is a heading for the 2.1.X sections. I/O to the devices that are on the recoded system will be performed by standard access methods under MVS.	

Sub-section	Title	Recoded
2.1.1	Console Data Terminal Control	No
	This is a priority 1 function, but there are no CDTs in the demonstration system. In the NY TRACON system, CDTs were used to interactively display and enter operator messages. In the recoded system, there is no interactivity.	

Sub-section	Title	Recoded
2.1.2	Disc Control	No
	Equivalent Disk I/O functions will be provided by MVS/RTX.	

Sub-section	Title	Recoded
2.1.3	MSP Control	No
	This function is not required by the FAA and is not required to maintain an integral system.	

Sub-section	Title	Recoded
2.1.4	MTS Control	No
	Equivalent Tape I/O functions will be provided by MVS/RTX.	

Sub-section	Title	Recoded
2.1.5	CMC Control	No
	This function is not required by the FAA and is not required to maintain an integral system.	

Sub-section	Title	Recoded
2.2	Executive Input Messages	No
	This function is not required by the FAA and is not required to maintain an integral system. Executive (EX) operator messages will not be processed during the demonstration. These messages include scheduling popups (via the CDT), scatter interrupts (which initiated a recovery sequence), diagnostic loading requests (capability to load diagnostic programs), Print Resources and Print Switches, Peripheral Status Down/Up (redefine status of peripheral devices), Task/Ancillary Message (allows operator to send message to on-call program), Select Designated Backup Level Program, Switch CDT Messages, Select Alternate MSP Channel, Select Alternate DCU Channel, CMC Related EX Messages, CDT Related Input Messages, and Wait for Input Command. The above commands relate to NY IRACON specific hardware, recovery processes or MPE scheduling of tasks. None of these functions will be recoded on the demonstration system.	

Sub-section	Title	Recoded
2.3	Executive Service Request	No
	This section provides technical content but contains no demonstrable functions. Executive Services in NY TRACON allow tasks to request operating system services. In the demonstration system, since it is recoded in Pascal/VS with a modern operating system, the language processor will generate I/O access method calls on behalf of the user. Application code will contain GETs and PUTs rather than an Executive Service request. Scheduling ESRs will be replaced by calls to the SEND/RECEIVE application services. For a description see Additional Capabilities section.	

Sub-section	Title	Recoded
2.3.1	Input/Output ESRs	No
	An equivalent function is being provided by a standard MVS access method.	

Sub-section	Title	Recoded
2.3.2	Indirect ESR Request	No
	This function is not required by the FAA and is not required to maintain an integral system.	

Subsection	Title	Recoded
2.3.3	Clear Arithmetic Overflow Designator	No
	This function is not required by the FAA and is not required to maintain an integral system.	

Subsection	Title	Recoded
2.3.4	Scheduling ESRs	No
	An equivalent function is being provided by RTX scheduling services invoked by SEND and RECEIVE application services.	

Subsection	Title	Recoded
2.3.5	Debug - Snap Dump	No
	An equivalent function is being provided by RTX Probe and Debug services.	

Subsection	Title	Recoded
2.3.6	Request System Resources	No
	This function is not required by the FAA and is not required to maintain an integral system.	

Sub-section	Title	Recoded
2.3.7	Critical Data ESRs	No
	This function is not required by the FAA and is not required to maintain an integral system. The demonstration system will not include recovery mechanisms.	

Sub-section	Title	Recoded
2.3.8	Device Oriented ESRs	No
	An equivalent function is being provided by standard MVS access methods. Refer to Section 2.3 of this document for the rationale.	

Sub-section	Title	Recoded
2.3.9.1	Request Data (E$DATA)	NO
	This function is not required by the FAA and is not required to maintain an integral system. In the MPE system, this ESR allows a task to read or write the contents of any memory location in the system. It is used to access an area of memory that the task cannot access directly. In the demonstration system, if a task cannot directly access a variable that it requires, it will send a request to the task that owns the data and the owning task will return the requested data.	

Subsection	Title	Recoded
2.3.9.2	System Scatter Interrupt (E3SCAT)	No
	This function is not required by the FAA and is not required to maintain an integral system.	

Subsection	Title	Recoded
2.3.9.3	Call Ancillary (E3CALL)	No
	This function is not required by the FAA and is not required to maintain an integral system. Ancillary programs will not be recoded for the demonstration system.	

Subsection	Title	Recoded
2.3.9.4	Exit (E3EXIT)	No
	An equivalent function is being provided by MVS/RTX and Pascal/VS An E3EXIT is used by a task to indicate that it has completed processing. In the demonstration system, the Pascal/VS support system will generate the program exit at the completion of execution.	

Sub-section	Title	Recoded
2.3.9.5	Switch CDT Messages (E$SIM)	No
	This function is not required by the FAA and is not required to maintain an integral system. The recoded system does not contain any CDTs.	

Sub-section	Title	Recoded
2.3.10	CMC Related ESRs	No
	This function is not required by the FAA and is not required to maintain an integral system.	

Sub-section	Title	Recoded
3.0	INITIALIZER MODULE	No
	An equivalent function is being provided by MVS/RTX Initialization. The MPE Initializer module initialized processor hardware, initialized MPE software, and passed control to task specified program routine. MVS/RTX will perform these services as part of normal job initiation under RTX.	

Sub-section	Title	Recorded
4.0	SCHEDULER MODULE	No
	This section provides technical content but contains no demonstrable functions. Refer to the Overview of the Multiprocessor Executive which appears at the beginning of Section 3.3 for the rationale.	

Sub-section	Title	Recorded
4.1	Popup Scheduler	No
	An equivalent function is being provided by RTX Time Scheduling. Refer to the Overview of the Multiprocessor Executive which appears at the beginning of Section 3.3 for the rationale.	

Sub-section	Title	Recorded
4.2	Planned Scheduler	No
	An equivalent function is being provided by the RTX Scheduler. Refer to the Overview of the Multiprocessor Executive which appears at the beginning of Section 3.3 for the rationale.	

Sub-section	Title	Recoded
4.3	Executive Time Check Routine	No
	An equivalent function is being provided by Timing Control executive service. This routine checks each processor's time to determine if it has been away from the Executive longer than the allotted time or has been in the Executive longer than the allotted time. In the demonstration system, Timing Control will verify that a subtask is not executing an unacceptable length of time. See Additional Capabilities below.	

Sub-section	Title	Recoded
5.0	INTERRUPT CONTROL MODULE	No
	An equivalent function is being provided by MVS/RTX Interrupt Processing. In the MPE system, the Interrupt Control Module processes operational and error interrupts. In the demonstration system, processor and peripheral communication (operational interrupts) will be fielded by MVS; error interrupts of a software nature (program checks) will be fielded by MVS/RTX; hardware interrupts will be fielded by MVS.	

Sub-section	Title	Recoded
6.0	DEBUG MODULE	No
	An equivalent function is being provided by RTX Debugging aids. The MPE Debug module allows setting and releasing of software breakpoints, timing of task execution, snap dumps, history function, automatic restart, etc. In the demonstration, no recovery capabilities will be provided. Program debugging during development will be performed by calls to RTX SNAP and TRACE routines.	

Additional Capabilities
SEND/RECEIVE will be an application service that provides intertask communication. These services will be used by subtasks to pass data and buffers between subtasks and to request services from other subtasks. Timing Control will be an application service that periodically determines if processing deadlines are being met. It also passes system time for output to the display at a predetermined interval. Initialization/Termination will be an application service that prepares each subtask for execution at system initialization and terminates processing of all subtasks at system termination.

3.4 Retrack

Retrack is a program that, through use of CDR tape, acts as a load tester and driver for the New York TRACON environment. For the NYTRACON demonstration program, RETRACK will act as a driver only. In the New York TRACON environment RETRACK is an off-line program which uses the backup IOPB to drive the operational system during non-operational periods. The NYTRACON program for the demonstration will be an integral part of the operational program.

The demonstration RETRACK will make use of the same CDR file that the original RETRACK uses; however, not all of the messages will be processed by RETRACK or the operational program. The messages that are not processed will be discarded.

The demonstration RETRACK will be written in PASCAL/VS. The data used will be read from a disk containing CDR data which has been converted to IBM format by an off-line program (see Section 3.21).

Sub-section	Title	Recoded
1.0	INTRODUCTION	NO
	This section contains general information on RETRACK, and contains no demonstrable functions.	

Sub-section	Title	Recoded
1.1	Purpose	NO
	This section contains general information on RETRACK, and contains no demonstrable functions.	

Sub-section	Title	Recoded
1.2	Scope	NO
	This section contains general information on RETRACK, and contains no demonstrable functions.	

Sub-section	Title	Recoded
1.3	Background	NO
	This section contains general information on RETRACK, and contains no demonstrable functions.	

Sub-section	Title	Recoded
1.4	Environment	NO
	Runs as part of the operational system as an MVS/RTX task. Input is from disk.	

Sub-section	Title	Recoded
1.5	Program Description	NO
	This section contains a general description of RETRACK, but contains no demonstrable functions. The demonstration Retrack will be an integral part of the operational system, not an independent program. Enhanced Target Generation will not be incorporated into the demonstration RETRACK. Input data will come from a single source. Refer to section 2.3.1, below. Input data will consist of all information on CDR tapes. Refer to section 3.0, below. The options of the New York TRACON RETRACK will not be incorporated in the demonstration RETRACK. If the data that is sent by RETRACK is not used by the demonstration operational program as it would have been by the New York TRACON program, the receiving task will discard the data.	

Sub-section	Title	Recoded
2.0	PROGRAM OPTIONS	NO
	This section contains general information, and contains no demonstrable functions.	

Sub-section	Title	Recoded
2.1	Assembly Options	NO
	This section contains general information, and contains no demonstrable functions.	

Sub-section	Title	Recoded
2.1.1	Message Processing Inhibits	NO
	This is a New York TRACON assembly option. The demonstration RETRACK will not inhibit CDR message types or subtypes. All messages will be read from the disk. The messages which are ignored by the New York TRACON RETRACK will also be ignored by the demonstration RETRACK. Those messages which are processed by the New York TRACON RETRACK, will also be processed by the demonstration RETRACK. Keyboard messages will not be inhibited by the demonstration RETRACK.	

Sub-section	Title	Recoded
2.1.2	Process Non-Standard Formats	NO
	RETRACK will be coded to accept standard NYTRACON formatted data only.	

Sub-section	Title	Recoded
2.1.3	System/Site Adaptation Parameters	NO
	System parameters used will be unique to the demonstration program. RETRACK Ultra program parameters will not be used.	

Sub-section	Title	Recoded
2.2	Program Startup Options	NO
	These options will not apply to the demonstration program	

Sub-section	Title	Recoded
2.2.1	Force Operational System Into Training Mode	NO
	This option will not apply to the demonstration program	

Sub-section	Title	Recoded
2.2.2	Select Input Sensors	NO
	The four New York TRACON sensors will be processed by the demonstration program. The selection option will not apply.	

Sub-section	Title	Recorded
2.3	Runtime Options	NO
	These options are system specific to UNIVAC hardware. They are not required for the demonstration.	

Sub-section	Title	Recorded
2.3.1	Select Input Media	NO
	Input data will come from an IBM formatted disk containing the CDR data which has been converted to IBM format.	

Sub-section	Title	Recorded
2.3.2	Select Replay Initiation	NO
	This is a UNIVAC hardware specific option. Startup times may be entered in to New York TRACON RETRACK program to invoke the processing of the RETRACK program. The demonstration RETRACK will startup on command from the user not from startup input.	

Sub-section	Title	Recoded
2.3.3	Enable/Disable Interfacility Data Processing	NO
	In the New York TRACON RETRACK, this is a hardware controlled option. For the demonstration RETRACK the option of inhibiting interfacility messages will not apply. RETRACK has the capability to playback interfacility messages when processing non-flight interfacility messages such as AM and CX The current RETRACK checks to make sure a flight plan has been received and acknowledged first, then it processes the non-flight interfacility messages. The demonstration RETRACK will also have this capability. The demonstration RETRACK will also have the capability to process interfacility flight plan messages.	

Sub-section	Title	Recoded
3.0	INPUTS AND INPUT DATA FORMATS	YES
	Data Buffer Header CDR Initialization CDR Termination Data Delete/Resume * Data Loss * Memory Dump * Sector Time Target Report Tracking Data Keyboard Entry Automatic Function * Interfacility Data MSAW ALARM message * Altitude Tracking message * MSAW DISPLAY message * CTS DATA message * Radar Only Target Report Radar Data Loss * CA Linear message * CA MFMAMS message * CA PROXIMITY message * * are discarded messages	

Sub-section	Title	Recoded
4.0	RETRACK OUTPUTS/OUTPUT DATA FORMATS	YES
	1) Sector Time Messages 2) Beacon/Radar Reinforced Beacon Target Messages 3) Radar only Target Report Messages 4) Display Keyboard Messages 5) Interfacility Input Messages Note: Only the following messages will be fabricated: Keyboard flight data message for CDR input tracking data for which there is no current flight plan.	

Sub-section	Title	Recoded
4.1	SRAP Message Formats	YES
	Only those that are applicable to the NYTRACON program will be included. (parallel SRAP message formats)	

Sub-section	Title	Recoded
4.1.1	Tampa/Sarasota Serial SRAP Message Formats	NO
	These message formats do not apply to the demonstration program.	

Subsection	Title	Recoded
4.1.2	ARTS IIIA/NEW YORK TRACON Parallel SRAP Message Formats	YES
	These message formats do apply to the demonstration program.	

Subsection	Title	Recoded
4.1.2.1	Beacon/Radar Reinforced Beacon Message Formats	YES
	These message formats do apply to the demonstration program	

Subsection	Title	Recoded
4.1.2.2	Radar Only Message Formats	YES
	These message formats do apply to the demonstration program	

Subsection	Title	Recoded
4.1.2.3	Weather Map Formats	NO
	These message formats do not apply to the demonstration program.	

Sub-section	Title	Recoded
4.1.2.4	Sector Mark Formats	YES
	These message formats do apply to the demonstration program.	

Sub-section	Title	Recoded
4.2	Common Digitizer (CD) MESG Formats	NO
	Not applicable to NYTRACON RETRACK.	

Sub-section	Title	Recoded
4.3	Display Keyboard Message Formats	YES
	All keyboard messages with no errors that are read from the CDR data will be processed and sent to keyboard processing. Keyboard messages in error will be logged to a designated log file.	

Sub-section	Title	Recoded
4.4	Interfacility Message Formats	YES
	RETRACK will read all interfacility messages, but will only send FP, CX, and AM messages to the demonstration interfacility module. The FP message must have a matching DA sent to the ARTCC to be sent to interfacility. All other messages will be discarded.	

Sub-section	Title	Recoded
5.0	SYSTEM INITIALIZATION AND CONTROL	NO
	This section contains information describing hardware options, as well as interactive run time options. The assembly and run time options will be incorporated into the core resident RETRACK program.	

Sub-section	Title	Recoded
5.1	RFDU	NO
	This is hardware related to UNIVAC, and is replaced by IBM/370 equipment	

Sub-section	Title	Recoded
5.2	Disk Subsystem Initialization	NO
	This is hardware related to UNIVAC, and is replaced by IBM/370 environment.	

Sub-section	Title	Recoded
5.3	VIC Tape Subsystem Initialization	NO
	This is hardware related to UNIVAC, and is replaced by IBM/370 environment.	

Sub-section	Title	Recoded
5.4	IMT Initialization	NO
	This is hardware related to UNIVAC, and is replaced by IBM/370 environment.	

Sub-section	Title	Recoded
5.5	IOPB Initialization	NO
	This is hardware related to UNIVAC, and is replaced by IBM/370 environment.	

Subsection	Title	Recoded
5.6	System Startup	NO
	This will not be hardware oriented to the extent discussed in this section. the MVS/ RTX environment will provide startup.	

Subsection	Title	Recoded
5.7	Select Runtime Options	NO
	The options specified in the RETRACK USER'S MANUAL are oriented to the New York TRACON RETRACK program only. Run time options for the demonstration RETRACK will be defined by the operating system of which RETRACK will be a subfunction.	

Subsection	Title	Recoded
APPENDIX A	Message Type Selection Opti	YES
	These equates are required to maintain an integral system.	

Sub-section	Title	Recoded
APPENDIX B	CDR System Parameter Options	YES
	Only those equates specific to NYTRACON will be included.	

Sub-section	Title	Recoded
APPENDIX C	OPS Description Parameters	YES
	Only those equates specific to NYTRACON will be included	

Sub-section	Title	Recoded
APPENDIX D	RETRACK Assembly Runstream	NO
	These values will be incorporated into the demonstration RETRACK, but will not be considered as a 'runstream.'	

Additional Capabilities
There will be no additional capabilities provided for the demonstration.

3.5 SRAP Processing

This document elaborates on the recoding specifications for Parallel SRAP processing. The sections are derived from NAS-MD-636.

PSRAP receives the radar reports, beacon reports and radar reinforced beacon reports, along with sector time messages, from RETRACK. It then puts them into the formats needed by TRACKING.

PSRAP will not do any hardware related SRAP functions, such as SRAP hardware initialization, performance monitoring, alternate SRAP selection and SRAP Confidence test. It will not process SRAP alarm messages.

Sub-section	Title	Recoded
1.0	INTRODUCTION	No
	This section provides an introduction to the following subsections and, as such, contains no demonstrable functions.	

Sub-section	Title	Recoded
2.0	SRAP INITIALIZATION	Yes
	Only the following SRAP Initialization functions will be implemented: Scan Time Initialization, Sector Mark Table Initialization, and Input Buffer Initialization.	

Sub-section	Title	Recoded
3.0	SRAP MESSAGE PROCESSING	No
	This section provides an introduction to the following subsections and, as such, contains no demonstrable functions.	

Sub-section	Title	Recoded
3.1	BEACON REPORT PROCESSING	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
3.2	RADAR REPORT PROCESSING	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
3.3	SECTOR MARK PROCESSING	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
3.4	ALARM MESSAGE PROCESSING	No
	The alarm processing function is not being provided as stated in Section 3.0: Software Requirements.	

Sub-section	Title	Recoded
4.0	SRAP PERFORMANCE MONITORING	No
	The SRAP performance monitoring function is not being provided.	

Sub-section	Title	Recoded
5.0	ALTERNATE SRAP SELECTION	No
	Since there is no SRAP performance monitoring, there is no need for the Alternate SRAP Selection function.	

Sub-section	Title	Recoded
6.0	SRAP CONFIDENCE TEST	No
	Since there is no SRAP performance monitoring, there is no need for the SRAP Confidence test function.	

Additional Capabilities
There will be no additional capabilities provided for the demonstration.

3.6 Target Processing (Tracking) and ISL (Inter-sensor Linker)

This document (NAS-MD-637) describes the specifications for tracking and inter sensor linker.

Tracking gets its inputs of target reports from PSRAP and flight plans from Interfacility. It also receives keyboard messages to update Tracking data base. The primary function of tracking is to correlate proper tracks with the targets and generate data to be displayed and to be extracted on CDR tape. In cases where correlation is not possible, it creates new tracks in CTS using the information in the target reports. Tracking will not store data for Conflict Alert and MSAW, since those functions are not being recoded.

Tracking algorithms will be completely preserved as they are in the current system.

Inter sensor linker links the associated tracks within one sensor to unassociated tracks in a related sensor.

Sub-section	Title	Recoded
1.0	INTRODUCTION	No
	This section provides an overview of the following subsections and contains no demonstrable functions.	

Sub-section	Title	Recoded
1.1	TRACKING SUBFUNCTIONS	No
	This section provides an overview of the tracking subfunctions and contains no demonstrable functions.	

Sub-section	Title	Recoded
1.2	TRACKING FLOW	No
	This section provides an overview of the tracking flow and contains no demonstrable functions.	

Sub-section	Title	Recoded
2.0	TRACKING CONTROL	Yes
	The tracking control function is a require- if the tracking function is to be implemented and consequently is a priority 1 function.	

Sub-section	Title	Recoded
3.0	TRACKED TARGET PROCESSING	No
	This section provides an overview of the following subsections and contains no demonstrable functions.	

Sub-section	Title	Recoded
3.1	CORRELATION	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
3.1.1	TRACKING FIRMNESS AND TRACK ORIENTED SMOOTHING	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
3.1.2	TRACKING BINS	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
3.1.3	PRIMARY/SECONDARY BINS	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
3.1.4	CROSS REFERENCING	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
3.1.5	TARGET SELECTION	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
3.1.6	PRIMARY/SECONDARY CORRELATION	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
3.1.7	NORMAL, PARENT AND PARENT TRIAL TRACK CORRELATION	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
3.1.8	SUSPENDED TRACKS	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
3.1.9	DEVIATION TRACK CREATION	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
3.1.10	SECOND PASS PROCESSING	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
3.1.11	INITIAL CORRELATION	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
3.1.12	DEVIATION TRACK CORRELATION	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
3.1.13	TRACK CORRECTION	Yes
	This is a priority 1 function	

Sub-section	Title	Recoded
3.1.14	AUTOMATIC ACQUISITION	Yes
	This is a priority 1 function	

Sub-section	Title	Recoded
3.1.15	STORE CONFLICT ALERT DATA	No
	The Advanced Tracking functions are not being implemented in the NY TRACON program recoding.	

Sub-section	Title	Recoded
3.2	PREDICTION	Yes
	This is a priority 1 function	

Sub-section	Title	Recoded
3.2.1	AUTO-DROP AREA PREDICTIONS	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
3.2.2	AUTO TRANSFER OF FDR	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
3.2.3	AUTO ACTIVATION OF AIRCRAFT TYPE	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
3.2.4	AUTO TRANSFER OF AIRCRAFT TYPE TO BRITE TABULAR LIST	No
	The New York TRACON recode demonstration project will not incorporate a Brite display	

Sub-section	Title	Recoded
4.0	PROCESS UNUSED REPORTS (PUR)	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
5.0	INTER-SENSOR LINKER (ISL)	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
6.0	EARLY DISCRETE CORRELATION (EDC)	Yes
	This is a priority 1 function.	

Additional Capabilities
There will be no additional capabilities provided for the demonstration.

3.7 Keyboard Processing

This document (NAS-MD-638) describes the specifications for the KEYBOARD module. The KEYBOARD module shall process all completed preview messages. The preview messages' characters shall be interpreted, and the required operation processing shall be initiated. The preview messages shall be received from the RETRACK module. RETRACK shall filter out invalid keyboard messages by looking at the error field in each message, and only sending those messages to the KEYBOARD module which are error free. RETRACK will also send to KEYBOARD flight data messages fabricated from the Tracking Data Messages.

The KEYBOARD module shall receive all error free keyboard messages which are on the CDR tape, but shall only process a subset of them. The following sections elaborate on which functions will be implemented, and which functions will not be implemented.

Sub-section	Title	Recoded
1.0	INTRODUCTION	No
	This section is administrative and contains no demonstrable functions.	

Sub-section	Title	Recoded
1.1	Components of the Keyboard Input Module	No
	This section is administrative and contains no demonstrable functions.	

Sub-section	Title	Recoded
1.1.1	Alphanumeric Keyboard	No
	This section provides technical content but contains no demonstrable functions.	

Sub-section	Title	Recoded
1.1.2	Slew Entry Device (SED)	No
	This section provides technical content but contains no demonstrable functions.	

Sub-section	Title	Recoded
1.1.3	Quick Look Selector Switches	No
	This section provides technical content but contains no demonstrable functions.	

Sub-section	Title	Recoded
1.2	Classification and Validation of Messages	No
	This section is administrative and contains no demonstrable functions.	

Sub-section	Title	Recoded
1.2.1	Message Categories	No
	This section provides technical content but contains no demonstrable functions.	

Sub-section	Title	Recoded
1.2.2	General Message Validation Criteria	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
1.2.3	Message Entry Error Indications	No
	This section provides technical content but contains no demonstrable functions.	

Sub-section	Title	Recoded
1.2.4	Duplicate ACID'S for Track File Identity	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
2.0	KEYBOARD OPERATIONAL FUNCTION PROCESSING (KOF)	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
2.1	Inputs	Yes
	This is a priority 1 function. The following functions will be recoded. Initiate Control Track Reposition Track Suspend Terminate Control Flight Data Entry The following functions will not be recoded. Handoff Initiate Interfacility Message Print INPRINT Interfacility Test Program Operational Training Target Generator Messages Conflict Alert The following Multifunctions will be recoded. deleted BCN (Beacon) deleted HVYJG (Heavy Jet) deleted MODL (Modify) PREK (Preview) SYSK (System Data) TABG (Tabular List Messages) YSCP (Scratch Pad) The following Multifunctions will not be recoded. ATIS CFGD (Configuration) DISL (Display) EMGL (Emergency) BRATS (Beacon Reports and Tracking Summary) FILK (Filter) IFP (Mag-Tape/Disc Flight Plan) KINK (Reinitialize Display) LDRL (Leader) OFFK (Auto-Offset) QMSAW (MSAW Display Inhibit) RDTL (Memory Readout) VMSAW (Enable/Disable MSAW Functions) X3CN (Display Sensor Switching) COR Extractor Manual Reconfiguration	

Sub-section	Title	Recoded
2.1	Inputs (continued)	Yes
	The following Implied Functions will be recoded. Beacon Readout Terminate Control Display/Inhibit Associated Track deleted Abbreviated Flight Data Entry Initiate Control Beacon Code Modify The following Implied Functions will not be recoded. Override Interfacility Display Presentation Handoff Accept/Recall Handoff Initiate Remote Tower Display Keyboard Functions Inhibit Blinking DM	
When keyboard messages that are not being recoded are encountered, they will be recorded on the CDR file and designated as unprocessed keyboard messages. When fabricated messages are processed, they will be recorded and designated as fabricated keyboard messages		

Sub-section	Title	Recoded
2.2	Subprogram Description	No
	This section provides technical content but contains no demonstrable functions.	

Sub-section	Title	Recoded
2.2.1	Initiate Control Operational Function (STL)	Yes
	This is a priority 1 function.	

Sub-section	Title	Required
2.2.1.1	Initiate a New Track File	Yes
	This is a priority 1 function.	

Sub-section	Title	Required
2.2.1.2	Activate an Existing Track File in Central Track Store	Yes
	This is a priority 1 function.	

Sub-section	Title	Required
2.2.1.3	Enable Automatic Acquisition of an Existing Track File	No
	Automatic acquisition is enabled for all tracks	

Sub-section	Title	Required
2.2.2	Track Reposition Operation Function (RPO)	Yes
	This is a priority 1 function.	

Sub-section	Title	Required
2.2.3	Track Suspend Operational Function (SUO)	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
2.2.4	Terminate Control Operational Function (DPL)	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
2.2.4.1	Terminate a Single Track	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
2.2.4.2	Terminate All Tracks	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
2.2.5	Handoff Initiate/Recall/Accept (HDL)	No
	This function is not required to maintain an integral system. Only data applicable to one controller is being processed for this demonstration.	

Sub-section	Title	Recoded
2.2.6	Flight Data Entry (FDL)	Yes
	This is a priority 1 function.	

Sub-section	Title	Required
2.2.6.1	Initiate new track file in CTS with Flight Plan or Store Status	Yes
	This is a priority 1 function	

Sub-section	Title	Required
2.2.6.2	Display "DM" for Keyboard Entered Flight Plans	Yes
	This is a priority 1 function	

Sub-section	Title	Required
2.2.6.3	Display/Delete Display of Aircraft Type in the Full Data Block	Yes
	This is a priority 1 function	

Sub-section	Title	Required
3.0	MULTIFUNCTION (KFK)	No
	This section provides technical support but contains no demonstrable function	

Sub-section	Title	Required
3.1	ATIS Multifunction (AIIS)	No
	This function is not required for operation an integral system. ATIS will be simulated for entire demonstration.	

Sub-section	Title	Recoded
3.1.1	Select and Display the HOST ALTIMETER setting, ATIS and GI or unique altimeter settings and unique GI.	No
	This function is not required to maintain an integral system. System data will be preset for entire demonstration.	

Sub-section	Title	Recoded
3.1.2	Enable/Disable Arrival Fix Area(s)	No
	This function is not required to maintain an integral system.	

Sub-section	Title	Recoded
3.2	Beacon Multifunction (BCNK)	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
3.2.1	Beacon Code Readout of a Single Track	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
3.2.2	Enter or Delete Selected Code in System Data Area.	No
	System data area will not display the selected codes.	

Sub-section	Title	Recorded
3.3	Configuration Multifunction (CONF)	No
	This function is not required to maintain an integral system. The consolidation/deconsolidation of control positions is not a part of this demonstration. System configuration will be preset for entire demonstration.	

Sub-section	Title	Recorded
3.4	Display Multifunction (DISP)	No
	This function is not required to maintain an integral system.	

Sub-section	Title	Recorded
3.5	Emergency Multifunction (EMRG)	No
	This function is not required to maintain an integral system. Emergency alarm failure/bias & inoperative will be displayed in the full data block.	

Sub-section	Title	Recorded
3.6	Filter Multifunction (FILT)	No
	Filtering of the data blocks will be based on preset limits.	

Sub-section	Title	Recoded
3.7	Beacon Reports and Tracking Summary	No
	This function is not required to maintain an integral system. Printed output of data collections via keyboard entry is not a part of this demonstration.	

Sub-section	Title	Recoded
3.8	Heavy Jet Flight Plan Status, site Adapted Alpha, Aircraft Type Multi-function (HVYJG)	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
3.9	Mag-Tape/Disc Flight Plan Multifunction (IFP)	No
	This function is not required to maintain an integral system. Flight plan input from tape or disc is not part of this demonstration	

Sub-section	Title	Recoded
3.10	F7J is currently undefined	No
	This section is administrative and contains no demonstrable functions. This section provides a place holder.	

Subsection	Title	Pa	[illegible]
3.11	Reinitialize Display	N	
	This function is not required [illegible] an integral system. The [illegible] previously inhibited display [illegible] will not be implemented for this [illegible]

Subsection	Title	Pa	[illegible]
3.12	Letter Multifunction (LT)	N	
	Automatic offset is implemented [illegible] demonstration		

Subsection	Title	Pa	[illegible]
3.13	Modify Multifunction (M)	[illegible]	
	This is a priority 1 [illegible]		

[illegible]	Title	[illegible]
[illegible]	Modify speed [illegible]	[illegible]
	This is a priority 1 [illegible]	

[illegible]	Title	[illegible]
3.13.1	Modify flight plan to display "TMA" on departure	N
	This function is a [illegible] modify an integral system	

Sub-section	Title	Recoded
3.14	F7N is currently undefined	No
	This section is administrative and contains no demonstrable functions.	

Sub-section	Title	Recoded
3.15	Auto-Offset Multifunction (OFFK)	No
	This function is not required to maintain an integral system. Automatic offset function the display is enabled for this demonstration.	

Sub-section	Title	Recoded
3.16	Preview Multifunction	Yes
	This is a priority 1 function	

Sub-section	Title	Recoded
3.16.1	Relocate the preview area and brite tabular lists	No
	Preview area will not be displayed and brite functions will not be implemented for this demonstration	

Sub-section	Title	Recoded
3.16.2	Select/inhibit supervisory position	Yes
	This is a priority 1 function	

Subsection	Title
3.17	Process MSAW Display Inhibit [illegible]
	This function is not [illegible] integral system. MSAW is a priority 2 [illegible] Advanced Tracking Category. [illegible] of this effort.

Subsection	Title
3.18	Map to Head of Multiple [illegible]
	This function is not [illegible] integral system. The ability [illegible] the map to [illegible] of this item entails:

Subsection	Title
3.19	System Data [illegible]
	This is [illegible]

Subsection	Title
3.19.1	Maintain System Data
	This [illegible] integral system.

Sub-section	Title	Recoded
3.19.2	Modify host altimeter or unique altimeter settings	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
3.19.3	System time settings	Yes
	This message will cause an abnormal termination.	

Sub-section	Title	Recoded
3.19.4	Initiate/modify/delete host ATIS character and general information.	No
	This function is not required to maintain an integral system.	

Sub section	Title	Recoded
3.19.5	Initiate/modify/delete unique general information.	No
	This function is not required to maintain an integral system.	

Sub-section	Title	Recoded
3.19.6	System date settings	Yes
	This message will cause an abnormal termination.	

Subsection	Title	Recorded
3.20	Tabular List Messages (TAMS)	Yes
	This is a priority 1 function	

Subsection	Title	Recorded
3.20.1	Relocate arrival/departure list	No
	This function is not required to maintain an integral system.	

Subsection	Title	Recorded
3.20.2	Relocate cursor/suspend list	No
	This function is not required to maintain an integral system	

Subsection	Title	Recorded
	Select/inhibit display of arrival/ departure tabular list	No
	This function is not required to maintain an integral system	

Subsection	Title	Recorded
3.20.3	Terminate display of arrival/ departure tabular list	Yes
	This is a priority 1 function	

Sub-section	Title	Recoded
3.20.5	Terminate all store tracks with ETA/PTD less time specified.	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
3.20.6	Relocate MSAW Display Area	No
	This function is not required to maintain an integral system. MSAW is a priority 2 function in the Advanced Tracking category, which is not in the scope of this effort.	

Sub-section	Title	Recoded
3.21	F7U is currently undefined	No
	This section is administrative and contains no demonstrable functions.	

Sub-section	Title	Recoded
3.22	Enable/Disable MSAW Functions (VMSAW)	No
	This function is not required to maintain an integral system. MSAW is a priority 2 function in the Advanced Tracking category, which is not in the scope of this effort.	

Sub-section	Title	Recoded
3.23	F7W is currently undefined	No
	This section is administrative and contains no demonstrable functions.	

Sub-section	Title	Recoded
3.24	Display Sensor Switching (X3CM)	No
	This function is not required to maintain an integral system. The scope of this demonstration is limited to one sensor.	

Sub-section	Title	Recoded
3.25	Scratch Pad Multifunction (YSCP)	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
3.26	F7Z is currently undefined	No
	This section is administrative and contains no demonstrable functions.	

Sub-section	Title	Recoded
3.27	CDR Extractor Control Multifunction (CDKEY)	No
	This function is not required to maintain an integral system	

Sub-section	Title	Recoded
3.28	Manual Reconfiguration (IORFG)	No
	This function is not required to maintain an integral system. The capability of controlling hardware (e.g. switching SRAPs, TTY or MSP), or controlling software functions (e.g. enable/inhibit printouts, full operational vs. backup programs) will not be part of this demonstration.	

Sub-section	Title	Recoded
3.29	Select/Inhibit Printout of IF Messages (INPR)	No
	This function is not required to maintain an integral system. There will not be any printout of IF messages.	

Sub-section	Title	Recoded
3.30	Interfacility Test Program Operational Function (TKOF14)	No
	This function is not required to maintain an integral system. Only FP, AM and CX inter-facility messages will be processed.	

Sub-section	Title	Recoded
4.0	IMPLIED FUNCTIONS	No
	This section provides technical content but contains no demonstrable functions.	

Sub-section	Title	Recoded
4.1	Beacon Readout	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
4.2	Handoff Accept/Recall	No
	This function is not required to maintain an integral system. Handoff processing will not be implemented for this demonstration.	

Sub-section	Title	Recoded
4.3	Handoff Initiate	No
	This function is not required to maintain an integral system. Handoff processing will not be implemented for this demonstration.	

Sub-section	Title	Recoded
4.4	Terminate Control	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
4.5	Display/Inhibit Associated Track	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
4.6	Inhibit Blinking "DM" from a FDP	No
	This function is not required to maintain an integral system.	

Sub-section	Title	Recoded
4.7	Abbreviated Flight Data Entry	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
4.8	Initiate Control	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
4.9	Implied Beacon Code Modify	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
4.10	Override Interfacility Display Presentation	No
	This function is not required to maintain an integral system.	

Sub-section	Title	Recoded
4.11	Remote Tower Display Keyboard Functions.	No
	This function is not required to maintain an integral system. Tower messages will not be processed for this demonstration	

Sub-section	Title	Recoded
5.0	TRAINING TARGET GENERATOR MESSAGES	No
	This function is not required by the FAA and is not required to maintain an integral system. Training target generator will not not be implemented for this demonstration.	

Sub-section	Title	Recoded
6.0	CONFLICT ALERT MESSAGES	No
	This is a priority 2 function which is beyond the scope of this demonstration.	

Additional Capabilities
There will be no additional capabilities provided for the demonstration.

3.8 Display Output Processing

Display Output Processing (NAS-MD-639) primarily will be concerned with the preparation of alphanumeric track data for presentation on the display. There will also be display of selected system data (see below). Interactive keyboard responses (preview area and readout area) will not be processed. Only data originating from the retrack modules that impact tracking/display data will be processed. System parms/data will have to be initialized to some pre-determined values.

Display processing will support the display

Automatic Offset

Full, Limited, Partial Data Blocks and Single Symbols

Coast/Suspend, Arrival/Departure Tabular Lists

System Data display outputs of Current Time, Current Altimeter Setting

Display processing will not display

Preview and Readout Areas

MSAW/CA Data Blocks

IOP/DBM/MDBM Operations and Memory

Brite display Tabular List

System Data display outputs of Memory, Program Level, Test Targets, Overload Sensing and Protection, Emergency/Radio Failure/Hijack & Suspect Aircraft, Host ATIS Character & General Information, Selected Codes

Sub-section	Title	Recoded
1.0	INTRODUCTION	No
	This section provides technical content but contains no demonstrable functions. This is an overview of some of the functions in the current TRACON system.	

Sub-section	Title	Recoded
2.0	ENVIRONMENT	No
	This section is administrative and contains no demonstrable functions	

Sub-section	Title	Recoded
2.1	General	No
	This section is administrative and contains no demonstrable functions.	

Sub-section	Title	Recoded
2.2	Output Data Transfer Function	No
	This is a priority 2 function. This function is not required by the FAA and is not required to maintain an integral system. 1. Data transfer from host to situation display will be done using RTX-MVS tools. a. We will not be using sublists to process data information. 2. Memory buffer management will not be done using the IOP/MDBM. A method of passing data from the applications (host) to the situation display will be devised.	

Sub-section	Title	Recoded
2.3	MDBM Operation Description	No
2.3.1	General	
2.3.2	DBM Operation	
2.3.2.1	Linked Control Word File	
2.3.2.2	Completion of a Sublist	
	This section provides technical content but contains no demonstrable functions. An overview of the MDBM/DBM functions are discussed in this section of the document.	

Sub-section	Title	Recoded
2.4	Memory Allocation for MDBM	No
	This section provides technical content but contains no demonstrable functions. This is an overview of the MDBM & data support which are sub-divided into sublists. 1. We are not using sublist processing or MDBM data storage, but, there is still a need to store & display some data.	

Sub-section	Title	Recorded
2.4.1	Tabular Display Data	Yes
	This is a priority 2 function. This function is derived from the FAA requirements and is required to maintain an integral system. The supported data in the system display area are: * Time * Altimeter The non-supported data in the system display area are: * Memory readout area * Emergency/radio failure/hijack/suspect aircraft indication * Program level * Test targets * Overload sensing and protection * ATIS character & general info. Other non-supported display data are: * Aircraft which are in MSAW low altitude warning or in Conflict Alert. Rationale - Please. look at sub-section 2.4.	

Sub-section	Title	Recoded
2.4.2	Keyboard Display Data	Yes
	This is a priority 2 function. This function is derived from the FAA requirements and is required to maintain an integral system. Each keyboard connected to the display has its own memory allocation which contains: Keyboard readout/preview (not-supported) Keyboard coast/suspend list Keyboard store track list Rationale - look at sub-section 2.4. Although no interactive keyboard processing will be supported, nevertheless, keyboard data could enter into the system from the retrack tape.	

Sub-section	Title	Recoded
2.4.3	Data Blocks	Yes
	This is a priority 2 function. This function is derived from the FAA requirements and is required to maintain an integral system. Rationale - look at sub-section 2.4.	

Subsection	Title	Recoded
2.4.4	Single Symbols	Yes
	This is a priority 2 function This function is derived from the FAA requirements and is required to maintain an integral system. Rationale - look at subsection 2.4	

Subsection	Title	Recoded
2.4.5	P-Stack Control	No
	Rationale - Look at subsection 2.2.	

Subsection	Title	Recoded
2.4.6	Memory Management	No
	This is a priority 2 function Rationale - Look at subsection 2.2.	

Subsection	Title	Recoded
3.0	DISPLAY CONSOLE OUTPUT	No
	This section is administrative and contains no demonstrable functions.	

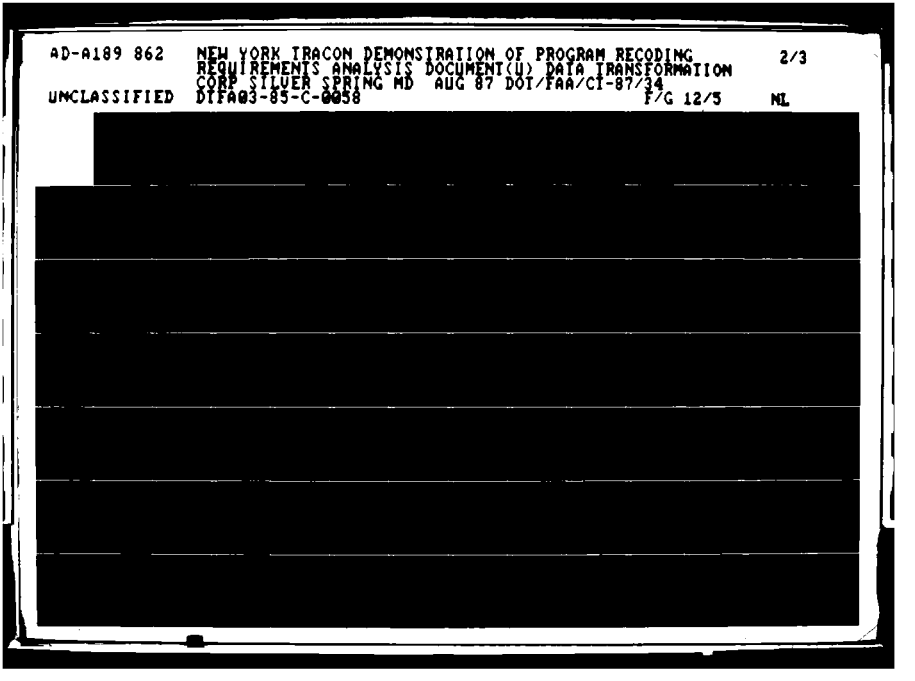
Sub-section	Title	Recoded
3.1	Introduction	No
	This section provides technical content but contains no demonstrable functions. This overviews the class definition of display console data consisting of: Single symbols Limited data blocks Full data blocks Partial data blocks	

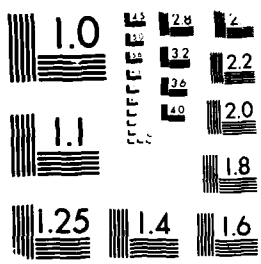
Sub-section	Title	Recoded
3.2	Associated Tracks	Yes
	This is a priority 2 function. This function is derived from the FAA requirements and is required to maintain an integral system. Associated tracks are processed as full data blocks for all tracks under a controlling console.	

Sub-section	Title	Recoded
3.2.1	Full Data Blocks (FDB)	Yes
	This is a priority 2 function. This function is derived from the FAA requirements and is required to maintain an integral system. Alphanumeric track data is periodically updated to indicate the track position.	

AD-A189 862 NEW YORK IRACON DEMONSTRATION OF PROGRAM RECODING REQUIREMENTS ANALYSIS DOCUMENT(U) DATA TRANSFORMATION CORP SILVER SPRING MD AUG 87 DOT/FAA/CT-87/34 2/3

UNCLASSIFIED DTFA03-85-C-00058 F/G 12/5 NL





Sub-section	Title	Recoded
3.2.3	Command Codes	No
	This is a priority 2 function. This function is derived from the FAA requirements and is required to maintain an integral system. Data transfer from host to situation display is handled differently.	

Sub-section	Title	Recoded
3.3	Unassociated Tracks	Yes
	This is a priority 2 function. This function is derived from the FAA requirements and is required to maintain an integral system. Unassoc. tracks are processed and presented as limited data blocks or special single symbols on each display.	

Sub-section	Title	Recoded
3.3.1	Limited Data Block (LDB)	Yes
	This is a priority 2 function. This function is derived from the FAA requirements and is required to maintain an integral system.	

Subsection	Title	Recoded
3.3.1.1	Format of Limited [illegible]	Yes
	This is a priority [illegible] function. This function is derived from the FAA requirements and is required to maintain an integral system. Formats of data [illegible]	

Subsection	Title	Recoded
3.3.1.1.1	Position Symbol	Yes
	This is a priority 2 function. This function is derived from the FAA requirements and is required to maintain an integral system.	

Subsection	Title	Recoded
3.3.1.2	Unassociated Track Symbology Leader	Yes
	This is a priority 2 function. This function is derived from the FAA requirements and is required to maintain an integral system. Length of the leader is variable (zero to 1.5 inches) and will be coded as a system parameter.	

Sub-section	Title	Recoded
3.3.1.2	Processing of Limited Data Blocks	Yes
	This is a priority 2 function. This function is derived from the FAA requirements and is required to maintain an integral system. List of conditions are documented.	

Sub-section	Title	Recoded
3.3.2	Single Symbols	Yes
	This is a priority 2 function. This function is derived from the FAA requirements and is required to maintain an integral system. Conditions/limitations of displaying data are discussed.	

Sub-section	Title	Recoded
3.3.3	Command Codes	No
	This is a priority 2 function. This function is derived from the FAA requirements and is required to maintain an integral system. Data transfer from host to situation display is handled differently.	

Subsection	Title	Recoded
3.4	Partial Data Blocks	Yes
	This is a priority 2 function. This function is derived from the FAA requirements and is required to maintain an integral system.	

Subsection	Title	Recoded
3.4.1	Format 1 Partial Data Block	Yes
	This is a priority 2 function. This function is derived from the FAA requirements and is required to maintain an integral system. Overview of formats.	

Subsection	Title	Recoded
3.4.2	Position Symbol	Yes
	This is a priority 2 function. This function is derived from the FAA requirements and is required to maintain an integral system This position symbol is an alphanumeric character which identifies the controller keyboard or the letter 'C' indicating the track is controlled by ARTCC	

Sub-section	Title	Recoded
3.4.3	Processing of Partial Data Blocks	Yes
	This is a priority 2 function. This function is derived from the FAA requirements and is required to maintain an integral system. Display the track if it is within selected filter limits. Full data blocks supersede the display of partial data blocks.	

Sub-section	Title	Recoded
3.5	MSAW/CA Data Blocks (MCADB)	No
3.5.1 3.5.2 3.5.3	Format of MSAW/CA Data Blocks Position Symbol Processing of MSAW/CA Data Blocks This is a priority 2 function. This function is not required by the FAA and is not required to maintain an integral system. 1. Assumption - not performing MSAW/CA. The data base and display of data processing are not needed.	

Sub-section	Title	Recoded
4.0	TABULAR LISTS	No
	This section is administrative and contains no demonstrable functions.	

Subsection	Title	Recorded
4	Introduction	Yes
	This is a prior	
	This function is	rAA
		this or
	integral system	
	This	messages.
	Site adaptation	ation and
	maintenance	

Subsection	Title	Recorded
	abbreviation list	N
	This section is	
	contains	

Subsection	Title	Recorded
	Table of Contents	
	This is a paid	
	This section is	
	required and is	ain in
	integral system	
	Associated	relate for
	and not	
	transferred	

Sub-section	Title	Recoded
4.2.2	Format of Coast/Suspend Tabular Lists	Yes
	This is a priority 2 function. This function is derived from the FAA requirements and is required to maintain an integral system. This lists conditions of formatting data.	

Sub-section	Title	Recoded
4.2.3	Command Codes	Yes
	This is a priority 2 function. This function is derived from the FAA requirements and is required to maintain an integral system. Associated command codes with data.	

Sub-section	Title	Recoded
4.3	Flight Plans	No
	This section is administrative and contains no demonstrable functions.	

Sub-section	Title	Recoded
4.3.1	Flight Plans - Arrivals/Departures	Yes
	This is a priority 2 function. This function is derived from the FAA requirements and is required to maintain an integral system.	

Sub-section	Title	Recoded
4.3.2	Format of Arr./Dep. Tabular List	Yes
	This is a priority 2 function. This function is derived from the FAA requirements and is required to maintain an integral system.	

Sub-section	Title	Recoded
4.3.3	Single Symbol Fix Designators	Yes
	This is a priority 2 function. This function is derived from the FAA requirements and is required to maintain an integral system.	

Sub-section	Title	Recoded
4.3.4	Command Codes	Yes
	This is a priority 2 function. This function is derived from the FAA requirements and is required to maintain an integral system.	

Sub-section	Title	Recoded
4.4	Brite Display Tabular List	No
4.4.1	Landing Aircraft - Brite Display	
4.4.2	Format of Brite Display Tabular List	
4.4.3	Command Codes	
	This is a priority 2 function.	
	This function is not required by the FAA and is not required to maintain an integral system.	
	1. Assumption - not processing Brite displays.	

Sub-section	Title	Recoded
4.5	MSAW Display Area	No
4.5.1	Tracks Flagged for MSAW Warning	
4.5.2	Format of MSAW Display Area	
4.5.3	Command Codes	
	This is a priority 2 function.	
	This function is not required by the FAA and is not required to maintain an integral system.	
	1. Assumption - not performing altitude tracking, conflict alert, MSAW.	

Sub-section	Title	Recoded
5.0	SYSTEM DATA DISPLAY OUTPUTS	No
	This section is administrative and contains no demonstrable functions.	

Sub-section	Title	Recoded
5.1	Introduction	Yes
	This section pro[illegible] content but contains no det[illegible] Initial locat[illegible] area data on the display conf[illegible] sed in site adaptation[illegible] will be relocated by an Engr[illegible]

Sub-section	Title	Recoded
5.2	Current time	Yes
	This is a priority [illegible] tion. This function i[illegible] from the FAA requirements and is required to maintain an integral system.

Sub-section	Title	Recoded
5.3	Current Altim[illegible]	Yes
	This is a pri[illegible] This functi[illegible] FAA requirements and is [illegible] maintain an integral syste[illegible]

Sub-section	Title	Recoded
5.4	Host ATIS Character and Gen. Info. or Unique Designator Gen. Info.	No
	This is a priority 2 function. This function is derived from the FAA requirements and is not required to maintain an integral system.	

Sub-section	Title	Recoded
5.5	Selected Codes	No
	This is a priority 2 function. This function is derived from the FAA requirements and is not required to maintain an integral system.	

Sub-section	Title	Recoded
5.6	Emergency/Radio Failure/Hijack & Suspect Aircraft	No
	This is a priority 2 function. This function is not required by the FAA and is not required to maintain an integral system. 1. Assumption - not processing multifunctions (emergency). 2. Emergency indicator will not be shown in the system data area but will be shown in the full data block area.	

Sub-section	Title	Recoded
5.10	Overload Sensing and Protection	No
	This is a priority 2 function. This function is not required by the FAA and is not required to maintain an integral system. 1. Assumption - not doing SRAP hardware processing.	

Sub-section	Title	Recoded
5.11	CA Inhibit	No
	This is a priority 2 function. Rationale - Look at sub-section 4.5.	

Sub-section	Title	Recoded
6.0	PREVIEW/READOUT AREA	No
	This is a priority 2 function This function is not required by the FAA and is not required to maintain the integral system. Readout area is used like the preview area, it is used to display keyboard message entries and data as a result of a keyboard request Preview area is used to store the preview content of keyboard entries that are to be entered into DEDS. Preview data is prepared and maintained by keyboard input processing 1. Assumption - there will be no category file processing from the keyboard 2. Petrack will filter out erroneous, therefore eliminating the need for preview areas.	

Sub-section	Title	Recoded
7.0	SLEW ENTRY DEVICE OUTPUT	No
	This is a priority 2 function This section provides technical support but contains no demonstrable functions	

Sub-section	Title	Recoded
8.0	AUTOMATIC OFFSET	No
	This section is administrative and contains no demonstrable functions	

Sub-section	Title	Recoded
8.1	Automatic Offset - Introduction	No
	This section provides technical content but contains no demonstrable functions.	

Sub-section	Title	Recoded
8.2	Active Track Automatic Offset	No
	This section is administrative and contains no demonstrable functions.	

Sub-section	Title	Recoded
8.2.1	Offset Conditions	No
	This section provides technical content but contains no demonstrable functions.	

Sub-section	Title	Recoded
8.2.2	Offset processing	Yes
	This is a priority 2 function. This function is derived from the FAA requirements and is required to maintain an integral system. 1. Automatic offset used to prevent overlap of track info.	

Sub-section	Title	Recoded
9.0	DISPLAY REFRESH RATE	No
	This is a priority 2 function. An equivalent function is being provided by: 1.Display refresh rate will be controlled by the situation display.	

Additional Capabilities
1.There will a method of displaying a history trail of a track. 2.There will be the use of a color flag used to display color on the display. Although the demonstration is performed without color, future anticipated demonstrations will use color.

3.9 Interfacility Data Transfer

Interfacility Data Transfer as specified in NAS-MD 640 contains the functional requirements between NAS Enroute Stage A and NY TRACON. The data are classified as operational flight data, track data, test data and related responses. This module is used as the primary means of entering flight plan data into the system.

Sub-section	Title	Recoded
1.0	INTRODUCTION	No
	This section provides technical content but contains no demonstrable functions.	

Sub-section	Title	Recoded
2.0	ARTCC-NY TRACON OPERATIONAL FLIGHT DATA TRANSFER	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
2.1	Flight Plan Message (FP)	Yes
	This is a priority 1 function. It is used as a mechanism to obtain flight plans. This includes departure flight plans, arrival flight plans, overflight plans and duplicate flight plans. No responses will be generated for these messages.	

Sub-section	Title	Recoded
2.2	Amendment Message (AM)	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
2.3	Cancellation Message (CX)	Yes
	This is a priority 1 function.	

Sub-section	Title	Recoded
3.0	ARTCC-NY TRACON AND ARTS TO NY TRACON TRACK DATA TRANSFER	No
	Track data transfers will not be processed for this demonstration	

Sub-section	Title	Recoded
4.0	ARTCC-NY TRACON TEST DATA TRANSFER	No
	Test data transfers will not be processed for this demonstration.	

Sub-section	Title	Recoded
5.0	NY TRACON-ARTCC AND NY TRACON-ARTS RESPONSE MESSAGE TRANSFER	No
	Response messages will not be implemented for this demonstration. However, the system will maintain the ARTCC ACID/TRACON TCID relationship to process subsequent messages.	

Sub-section	Title	Recoded
6.0	NY TRACON-ARTCC OPERATIONAL FLIGHT DATA TRANSFER	No
	Interfacility outputs will not be implemented for this demonstration.	

Sub-section	Title	Recoded
7.0	NY TRACON-ARTCC AND NY TRACON-ARTS TRACK DATA TRANSFER	No
	Track data transfers will not be implemented for this demonstration.	

Sub-section	Title	Recoded
8.0	NY TRACON-ARTCC [illegible] DATA TRANSFER (TR)	No
	Test data transfers will not be implemented for this demonstration.	

Sub-section	Title	Recoded
9.0	ARTCC-NY TRACON AND NY TRACON [illegible] RESPONSE MESSAGE TRANSFER	No
	Response messages will not be processed for this demonstration	

Sub-section	Title	Recoded
10.0	DISCARDED MESSAGES	Yes
	In addition to [illegible] a recognizable [illegible] the field, these messages will be discarded Initiate Transfer (IT) Track Update (TU) Accept Transfer (TA) Test Data Transfer (TT) Acceptance Message (DA) Retransmit Message (RX) Rejection Message (TR) Data Test Message (DT)	

Sub-section	Title	Recoded
11.0	RETRANSMISSIONS	No
	No messages will be transmitted for this demonstration.	

Sub-section	Title	Recoded
12.0	MESSAGE PRIORITIES	No
	Output message priorities are not applicable because no messages are transmitted.	

Additional Capabilities
There will be no additional capabilities provided for the demonstration.

3.10 Bulk Store Flight Plans

This document (NAS-MD-641) specifies the fu[illegible] requirements for proce[illegible] Store Flight Plans. This function is be[illegible] f[illegible] Area.

Subsection	Title	Revised
NAS-MD-641	Bulk [illegible]	
	This [illegible] integral system.	
	[illegible]	
	Additional Capa[illegible]	
There will be no additional capabi[illegible] this demonstration		

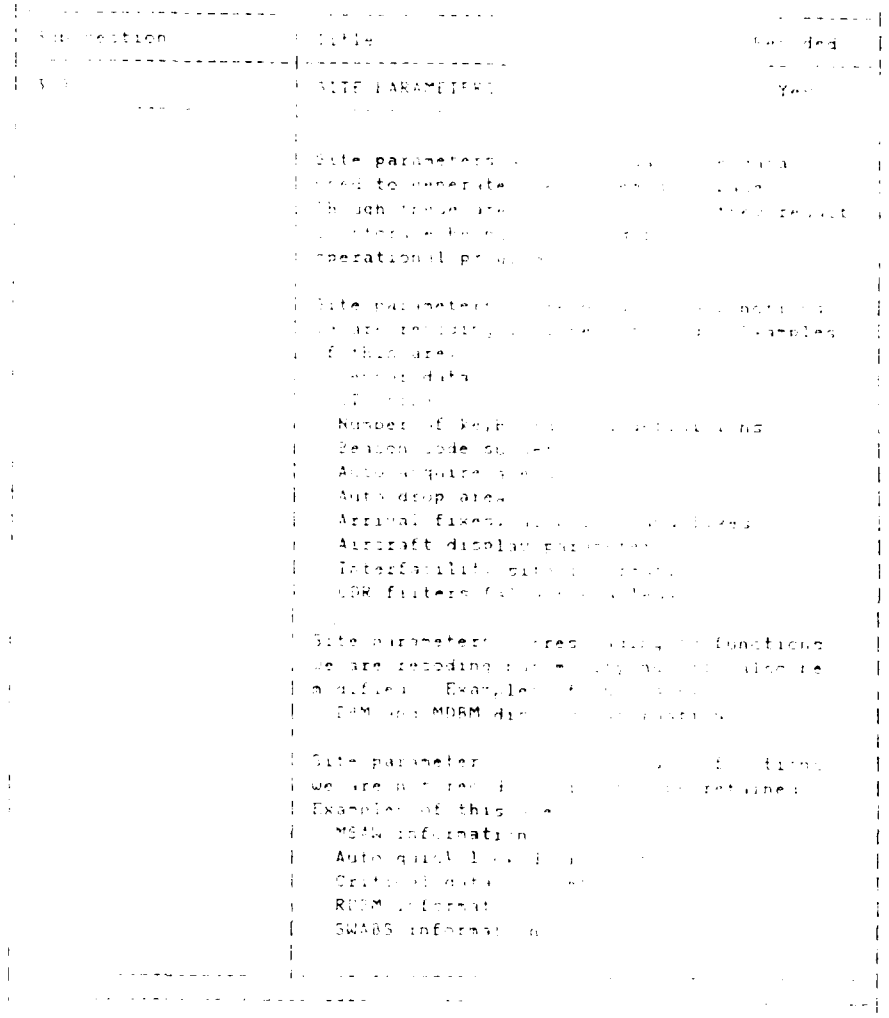
3.11 Non-Executive Error, Status and Input Messages

This document (NAS-MD-642) describes the Non-Executive Error and Status Messages which are printed on the CDTs to alert users of a significant change to the system. This function is beyond the scope of this demonstration.

Sub-section	Title	Recoded
NAS-MD-642	ASR-37 Non-Executive Error, Status and Input Messages	No
	This function is not required by the FAA and is not required to maintain an integral system.	

Additional Capabilities
There will be no additional capabilities provided for the demonstration.

Sub-section	Title	Recoded
2.0	SYSTEM PARAMETERS	Yes
	System parameters define data which are variable within the task programs, but are not site dependent. Generally, these are equated values that do not take up storage space in the current system. System parameters corresponding to functions we are recoding will be retained. Examples of this are: Bin parameters SRAP parameters Tracking parameters CDR filter parameters CTS word names System parameters corresponding to functions we are recoding but modifying will also be modified. Examples of this are: DBM parameters CDR data set parameters System parameters corresponding to functions we are not recoding will not be retained. Examples of this are: Interfacility retry information MSAW parameters FP disk information KIP parameters On-call program parameters	


Title
SITE PARAMETERS
Site parameters
Site parameters
Number of
Zenith code
Auto
Auto drop
Arrival fixes
Aircraft
Interfacility
LOR filters
Site parameter
Site parameter
Example of this
MSAW information
Auto
Critical
RDRM information
SWABS information

Sub-section	Title	Recoded
4.0	EXECUTIVE ASSEMBLY PARAMETERS	No
	An equivalent function is being provided by the MVS/RTX operating system. Refer to Section 3.3 of this document for the rationale.	

Sub-section	Title	Recoded
5.0	EXECUTIVE BUILD PARAMETERS	No
	An equivalent function is being provided by the MVS/RTX operating system. Refer to Section 3.3 of this document for the rationale.	

Sub-section	Title	Recoded
6.0	SYSTEM BUILD PARAMETERS	No
	An equivalent function is being provided by the MVS/RTX operating system. Refer to Section 3.3 of this document for the rationale.	

Subsection	Title	Required
7.0	CONFLICT ALERT	No
	Refer to Section ... document for the rationale.	
	This function ... the FAA and is not required ... integral system.	
...	...	...

Subsection	Title	Required
APPENDIX A	SITE VARIABLE PARAM...	Yes
	This function is ... the FAA requirements ... obtain an integral system.	
	See the discussion ... Item 7.0 of this document for the rationale.	
...	...	...

Subsection	Title	Required
APPENDIX B	NAS TRAFFIC DATA ...	No
	This function is ... the FAA requirements ... obtain an integral system.	
...	...	...

Additional Capabilities
There will be no additional capabilities provided for the demonstration.

3.13 MSAW and Altitude Tracking

This document (NAS-MD-644) contains the design data for the Minimum Safe Altitude Warning (MSAW) program. This function is not being implemented for the demonstration.

Sub-section	Title	Recoded
NAS-MD-644	MSAW and Altitude Tracking	N
	This is a priority 2 function in the Advanced Tracking category, which is not in the scope of this effort.	

Additional Capabilities
There will be no additional capabilities provided for the demonstration.

3.14 Non-Executive Console Teletype Input Processing & On-Call Tasks

This document (NAS-MD-645) describes all appropriate action that is taken once a message is entered from a Console Data Terminal. This function is beyond the scope of this demonstration.

Sub-section	Title	Recoded
NAS-MD-645	Non-Executive Console Teletype Input Processing.	No
	This function is not required by the FAA and is not required to maintain an integral system.	

Additional Capabilities
There will be no additional capabilities provided for the demonstration.

3.15 Builder/BUP & CDR Editor

As described in NAS MD-6446, the CDR Editor is an offline program which reads the CDR data that is collected online. The data which is recorded on the disk is searched for class, type/filter and mask values as specified during initialization of the Editor. The requested data is then read and printed onto a designated device, usually a high or medium speed printer.

The types of messages that CDR Editor processes are listed in Appendix A of this document.

Due to project module limitations several messages that are extracted during normal execution of the existing operational programs will not be extracted by the modified CDR. Therefore, some messages will not be received or printed by the Editor. The messages that will not be required are so indicated by a 'NO' under the required column in Appendix A.

The printed listing, which will be generated by the CDR Editor, will contain the same information that is provided by the FAS Editor program. However, we will not produce listings for tracking data, automatic functions, interfacility, or keyboard. The demonstration EDITOR will be run under VM.

Subsection	Title	Recoded
3.2	BUILDER	NO
	An equivalent function is being provided by commercial software and the MVS/RTX environment.	

Subsection	Title	Required
3.2	BUILDER UTILITY PROGRAM	NO
	An equivalent function is being provided by commercial software, and the MVS/RTX environment.	

Sub-section	Title	Recoded
3.0	INTRODUCTION TO CDR EDITOR	No
	This section provides an overview of the following section and, as such, contains no demonstrable functions.	

Sub-section	Title	Recoded
4.0	CDR EDITOR DESCRIPTION	Yes
	This is a priority 1 function. This function is derived from the FAA requirements, and is required to maintain an integral system.	

Subsection	Title	Recorded
APPENDIX A	EXTRACTION MESSAGES	Yes
	DATA BUFFER HEADER	No
	INITIALIZATION MESSAGE	Yes
	TERMINATION MESSAGE	Yes
	DATA DELETE/RESUME MESSAGE	No
	DATA LOSS	No
	MEMORY DUMP	No
	SECTOR TIME MESSAGE	Yes
	TARGET REPORT	No
	TRACKING DATA	Yes
	KEYBOARD ENTRY MESSAGE	Yes
	AUTOMATIC FUNCTION MESSAGE	Yes
	INTERFACILITY MESSAGE	Yes
	MSAW ALARM MESSAGE	No
	ALTITUDE TRACKING MESSAGE	No
	MSAW DISPLAY WARNING MESSAGE	No
	RT-STL GTS DATA MESSAGE	No
	RADAR ONLY TARGET REPORT MESSAGE	No
	LINEAR EXTRACTION MESSAGE	No
	MEMAMS EXTRACTION MESSAGE	No
	PROXIMITY EXTRACTION MESSAGE	No

Subsection	Title	Recorded
APPENDIX B	LISTING FORMATS	Yes
	The listing formats presented in Appendix B are identical in format to the printed output from the NYTRACON CDR Filter. Listings for Tracking Data, Automatic Functions, Interfacility and Keyboard will be produced for the demonstration	

Sub-section	Title	Recoded
APPENDIX C	PARAMETERS	Yes
	These parameters are required to maintain an integral system, and will be included in a stand alone NYTRACON EDITOR program.	

Additional Capabilities
There will be no additional capabilities provided for the demonstration.

3.16 Recovery

This document (NAS MD 647) describes [illegible] diagnostic sub programs [illegible] This function is beyond the scope [illegible]

Sub section	Title	Recoded
NAS MD 647	Executive	
	This function is not required for the FAA and is not required to maintain an integral system	
	Add-on Capabilities	
There will be additional capabilities provided [illegible] operation		

3.17 Continuous Data Recording Process

This document (NAS-MD-648) specifies the [illegible] requirements for Continuous Data Recording Processing (CDR).

[illegible] the NY TRACON system Continuous Data Recording has two major components: CDR Extractor Control and the CDR Extractor. Extractor Control provides manual and automatic switching between disk drives, performs checks of the function (enabled/disabled) and checks to see if CDR data are only enabled in the event of a system fault recovery sequence. In the demonstration system, CDR will be written to [illegible] using an MMS access method. This will verify that I/O has completed successfully. A file directory will not be maintained since the access method will determine the next available location on the tape. Once records will be queued for recording, records will not be lost due to an end of tape condition. This eliminates the need for overhead checking as is performed in the current NY TRACON CDR Extractor Control.

In the NY TRACON system, the CDR Extractor consists of three parts: the Initialization, Data Buffer Index Control and Data Buffer Output control. The purpose of the Extractor is to extract information from database areas, CIS files and buffers and place the information into output buffers. The CDR data will be obtained in the demonstration system by application programs at specific points during the execution of the tasks. The programs will issue a SEND to the CDR Extractor task; the CDR Extractor will be responsible for recording the data in a file that will be accessible to the offline editor program. In the demonstration system, direct I/O will be performed and the access method will be responsible for I/O buffering.

Sub section	Title	Recoded
3.1	INTRODUCTION	No
	This section pr[illegible] content but contains no dem[illegible] functions.	

Sub section	Title	Recoded
3.9	[illegible]	No
	An equivalent to [illegible] being provided by M/S/RTX file [illegible] in conjunction with RTX work queuing [illegible].	
	Refer to the [illegible] Continuous Data Recording which [illegible] at the beginning of Section 3.17 for the rationale.	

Sub section	Title	Recoded
[illegible]	[illegible]	No
	This [illegible] content but [illegible] dem[illegible] functions.	

Sub section	Title	Recoded
3.1	Inputs	No
	This section [illegible] content but contains no dem[illegible] functions.	

Sub-section	Title	Recoded
3.2.3	Data Buffer Output Control (DBOC)	No
	An equivalent [illegible] provided by MVS I/O services in combination with RTX work queuing mechanisms. Refer to the Overview of Continuous Data Recording which precedes the beginning of Section 3.1' for the rationale.	

Sub-section	Title	Recoded
3.3	Outputs	No
	This section provides conceptual content but contains no demonstrable functions.	

Additional Capabilities
There will be no additional capabilities provided for the demonstration.

3.18 Remote Display Processing

Remote Display Processing (NAS-MD-649) describes the interface between the NY TRACON operational program and the Remote Tower Cab Display (BANS) via a Communications Multiplexer Controller (CMC) and a Remote Display Buffer Memory (RDBM).

Recode of remote processing is beyond the scope of this project and will not be implemented.

Sub-section	Title	Recoded
MD-649	Remote Display Processing	No
	This function had no priority. It is not required to maintain an integral system. 1. Assumption - remote processing is not to be done.	

Additional Capabilities
There will be no additional capabilities provided for the demonstration.

3.13 Support Software

The NAS-MD 650 series of documents specifies [illegible] requirements for AIC Support Software. The series of documents [illegible] NAS-MD-650 (Support Software SIR CINCS), [illegible] NAS-MD-650B (LIBRARIAN), NAS-MD-650C (Compiler), NAS-MD-650D (Assembler), NAS-MD-650E (Loader), NAS-MD-650F (Utility and Simulator), and NAS-MD-650E (Support Software [illegible]).

[illegible] These software services in the NY [illegible] provide the capability to assemble [illegible] programs, load and link object programs [illegible] programs in a library [illegible] and to perform data storage conversions.

[illegible] demonstration system, all software [illegible] developed under the IBM VM [illegible] system. VM supports both CMS (Conversational Monitor System) and MVS, [illegible] batch operating system.

[illegible] library management software [illegible] and maintenance of [illegible] will be accomplished through the [illegible] an user interface [illegible] tailored for the N.Y. IRAQI [illegible] system that will [illegible] [illegible] programmers will use [illegible] interactively create [illegible] such as compilations, loads and [illegible] jobs are created, then [illegible] to MVS for compilation, link, [illegible] execution under MVS/BSE.

[illegible] test tools and conversion software [illegible] [illegible] system.

[illegible]

Sub-section	Title	Recoded
NAS-MD-650A	SUPPORT SOFTWARE ULTRA ASSEMBLER	No
	This function is not required by the FAA and is not required to maintain an integral system. Refer to the Overview of Support Software which appears at the beginning of Section 3.19 for the rationale.	

Sub-section	Title	Recoded
NAS-MD-650B	LIBRARIAN	No
	This function is not required by the FAA and is not required to maintain an integral system. Refer to the Overview of Support Software which appears at the beginning of Section 3.19 for the rationale.	

Sub-section	Title	Recoded
NAS-MD-650C	SUPPORT SOFTWARE LOADER	No
	The equivalent function is being provided by Linkage-Editor in MVS. It will generate executable load modules for execution under MVS/RTX. Refer to the Overview of Support Software which appears at the beginning of Section 3.19 for the rationale.	

Sub section	Title	Needed
NAS MD-650D	[illegible]	No
	[illegible]	
Sub section	Title	Required
NAS MD-650E	[illegible]	No
	[illegible]	
	Additional Checks	
There will be no additional capability [illegible] demonstration.		

3.20 Conflict Alert Adaptation Standards & Guidelines

This document (NAS-MD-651) provides a functional description of Conflict Alert. This function is beyond the scope of this demonstration.

Sub-section	Title	Recoded
NAS-MD-651	Conflict Alert Adaptation Standards and Guidelines	No
	This is a priority 2 function in the Advanced Tracking category, which is not in the scope of this effort.	

Additional Capabilities
There will be no additional capabilities provided for the demonstration.

1.2.1 CDB Tape Conversion Utility Description

This section describes the utility program that converts a tape from the Mr Tape format to the CDB format. This program will be referred to as the CDB Tape Conversion Utility.

Input

- Utility will be run in batch mode if desirable.
- The entire CDB system must be
- The operating system must be in order
- The Petrie
  order
- The output (or
- Petrie

The following record types are supported:

- Data Buffer Header
- Identification Mo
- Termination Mo
- Data Delete
- Data Loss (04)
- Comment Comp (05)
- Mo Mo (06)
- Input Report (07)
- Tracking Data (08)
- Keyboard Entry (
- Automatic Function (10)
- Interface Message (11)

1-5

- MSAW Alarm (14)
- Altitude Tracking Data (15)
- MSAW Display Warning (16)
- RB-BTL CTS Data Message (17)
- Radar Only Target Report (20)
- Radar Data Loss (21)
- Linear Extraction (22)
- MFMAMS Extraction (23)
- Proximity Extraction (24)

We will ensure that all records on the CDR tape are converted, even those that are not processed by Retrack. Records not processed by Retrack will have the message type converted and space reserved, but otherwise the contents will not be converted. The following records will be converted in their entirety to a S/370 format:

- Data Buffer Header
- Termination Message (02)
- Sector Time Message (06)
- Target Report (07)
- Tracking Data (10)
- Keyboard Entry (11)
- Interfacility Message (13)
- Radar Only Target Report (20)

The fields in the input CDR tape comprise various types of data:

- Octal bit(s) - flags, data items (such as range, azimuth, time), both signed and unsigned
- Octal digits - message type, beacon codes
- Octal BCD - altitude
- ASCII - aircraft IDs in the tracking data

- TI ASCII - characters in keyboard [illegible]
- EBCDIC - characters in interface [illegible]

The following conversions are [illegible]

- Octal bit [illegible] to hexadecimal bit [illegible] signed and unsigned
- Octal bit [illegible]
- Octal digit to Box digit (pre [illegible] digits) to EBCDIC

  For example, the [illegible] type will [illegible] this way,
- [illegible]
- ASCII to [illegible]
- TI ASCII to EBCDIC
- EBCDIC to EBCDIC [illegible] characters in an IOP [illegible] characters in a [illegible]

The conversion routine will [illegible] based on the input type and the desired [illegible] ASCII [illegible] used using translate tables.

The resultant CDR [illegible] on the [illegible] data [illegible] be translated to [illegible] records on the input CDR file. [illegible] type will be [illegible] file. If the record on the input file [illegible] the system, each [illegible] this record will be converted to a [illegible] field on the disk file.

4.0 System Architecture

The current New York TRACON system comprises two subsystems:

- a development and support subsystem (offline) used to build and reduce data from the operational subsystem
- an operational subsystem (online) comprising these subsystem
  - Data processing
  - [illegible]
  - System monitor and control
  - [illegible]
  - Data entry and display (including local and remote interf.

Current New York TRACON Architecture

The current development subsystem runs on a commercial Sperry 1100 processor and peripherals) under a commercial off-the-shelf operating system and utilities. [illegible] the (IOP) data processing equipment used by the operational subsystem.

The development subsystem uses special purpose software to build and reduce data generated by the operational subsystem. The operational software is coded in Ultra. The Ultra assembler is particular to the IOP architecture. Of special interest in the New York TRACON demonstration is the CDR Editor, which reduces the data recorded on the CDR file, created by the operational software.

Assemblies and operational software builds can be done on both the 1100 and the IOP; the CDR Editor runs only on the IOP.

The current operational system subsystem runs in a multiprocessor, a set of IOPs connected point-to-point and shared memory modules. The IOP is a UNIVAC 83[illegible] processor. The IOPs and memory modules and attached peripherals define the data processing subsystem (DPS).

The DPS interfaces with the en route ARTCCs through a Communications Multiplexer Controller (CMC).

The CMC also provides the interface between the DPS and the Console Data Terminals (CDTs). The CDTs provide an interactive means for the operations and system engineering staff to communicate with the system.

Targets are acquired (from the sensors) through the sensor receiver and processor (SRAP). The SRAP interfaces with the IOPs through the processors' (SRAP and IOP) channels.

The DPS interface to the data entry and display subsystem (DEDS) is in two parts: the local interface directs controller data to and from the Texas Instruments keyboard and display (in the TRACON) through multiplexor display memory (MDBM) [illegible] buffer memory (DBMs) units; the remote interface (to and from the DEDS [illegible] in the tracon) comprises (from the IOP outward) a CMC, a modem in [illegible] a modem in the tower, and a remote display buffer memory (RDBM) in the [illegible].

[illegible] software [illegible] customized monitor, the multiple sensor executive (MSE) [illegible] There is firmware in the SRAP but no software in [illegible].

[illegible] of the operational subsystem is maintained through the use of [illegible] elements, such as IOPs and memory modules, that can be swapped for failed elements.

[illegible] Demonstration Architecture

A demonstration system also comprises a development and an operational subsystem. The operational subsystem, however, consists of only a data processing subsystem and a data entry and display subsystem (the local interface only).

Both the development and the operational subsystems will run under a single [illegible] an IBM 3083. Both subsystems can run on a single 3083-BX processor with 3380 DASD, 3480 tape cartridge units, high speed printers and a set of [illegible] terminals. The primary characteristic of a 3083 that set it apart from [illegible] these: the 3083 is a uniprocessor; it executes a simpler and more robust [illegible] set at roughly four times the cycle speed of an IOP and contains 16 megabytes of storage. The interface to secondary storage devices, the DASD and tapes, run at channel speed (approximately 3 megabytes per second) and the devices hold gigabytes of data.

The development software architecture supports a batch, interactive, and network environment. All software executes under VM. VM supports both CMS, the Operational Monitoring System, and MVS, IBM's standard batch operating system. Interactive users can run directly under CMS or they can use TSO under VM-MVS. TSO is IBM's standard MVS time-sharing system. The New York TRACON demonstration software development tools run under CMS.

Because the operational subsystem is designed to run under MVS, both the development and operational subsystems can run on the same processor under VM. RTX, the [illegible] realtime control program, allows the ARTS applications to run as [illegible] programs under MVS. (RTX runs under MVS similar to the way that TSO runs [illegible] MVS for interactive work.)

In a test environment, the development subsystems can communicate with the operational subsystem through VM: programmers can create and edit the operational software under VM-CMS and send it to MVS to be compiled, built and executed. In a demonstration environment, the operational subsystem will run under MVS-RTX (without VM and the development subsystem in the processor).

The demonstration development system, under VM-CMS, will use a set of interactive panel-driven tools, tailored to the New York TRACON demonstration, but based on commercial products. The tools include automated design issues, program status reports, software accounting and development planning, as well as panels designed to interactively run batch work, such as compilations.

The demonstration data processing subsystem will be connected to the demonstration DEDS through a 3083 BX processor channel. The demonstration DEDS consists of a Device Attachment Control Unit (DACU), driven by an IBM PC, and a single color display, comprising a display generator with attached data entry/ display monitor.

The demonstration operational software architecture is described in detail in "5.0 Software Architecture". In summary, the ARTS applications, including Peer, the test mode simulated inputs driver, will run under MVS-RTX and will use the services of MVS and RTX through an applications services interface developed for the New York TRACON demonstration. There will be no software recoded or developed for recovery or availability functions. The CDR Editor will execute under MVS-ISO after the operational run is complete.

3.3 Software Architecture

This section is in two parts. The first subsection describes the rationale for the demonstration operational subsystem software architecture and our approach to structural changes in the applications software. The second subsection is a formal set of definitions and rules describing the expected behavior of the operational subsystem software.

The software architecture of the development subsystem is commercial off-the-shelf; for an overview of the products and their capabilities refer to the "New York IRACON Operational Demonstration of Program Recoding Technical Proposal," and "4.0 System Architecture"

Description of Software Architecture, Description and Rationale

To make the New York IRACON operational data processing subsystem to execute on an IBM S/370 processor and interface with S/370 peripherals requires that structural changes be made to the current software, which executes on an IOP.

The Differences between the IOP and S/370

Operating systems supervisors bind applications programs and their data to the data processing resources (processing time, memory, channels, I/O devices, etc.) they require to do system work; e.g., track an aircraft. (This binding of work to programs and hardware is often referred to as a task.) In doing so they provide each application with an interface

- To the processor and its memory and channels
- To external data processing resources, such as I/O devices, communications lines and other systems
- To the application user and the operator
- To the other applications.

The differences between the current operational subsystem and the demonstration operational subsystem with respect to software architecture turn on these four interfaces, the last determined by the rules for concurrency and sequential processing. (Although the 3083 is a uniprocessor, tasks will run concurrently just as in the IOP system.)

The differences caused by different generations and models of equipment, including the processor, its instruction set, etc., are documented in the principles of operations and design data for the IOP hardware and for the S/370 hardware, and will not be elaborated on here. (As described in "3.0 Software Requirements", the demonstration system will process data only in IBM S/370 format.)

The demonstration operational subsystem is much more constrained than the current system in that the demonstration processor will interface only with DAED files and a single DEDS display. The demonstration operational subsystem will not process bulk flight data, and it will not interface with ARTCC's. It will not allow operator or applications user inputs (there will be no interface to a SRAP) during its execution. There will be no realtime recovery. It will process simulated inputs from DEDS keyboards and from interfacility (ARTCC) interfaces through Retrack. Retrack will read the inputs from a file resident on a 3380 DASD, and the CDR records generated by the demonstration run will be written to a file also resident on a 3380 DASD.

The demonstration operational subsystem applications will be a subset of the current applications, but the overall data flow and the processing of the same work will be the same. Retrack will read CDR records and pass them to the interactive processors, keyboard and interfacility, for input parsing and validation, and to the target acquisition processor (TAPROC) for validation and buffering; the resultant data will be used to track the aircraft. Flight tracking will pass the data that are candidates for display to the display processor, they will write it to the situation display.

In the current system the rules for concurrent and sequential execution of the applications are encoded in a lattice and carried out and enforced by the MPE. Because the IOP is a multiprocessor, the MPE assigns system work to the application software in a strict time-sequenced order and then allocates the work software load to an available IOP. The multiprocessor achieves maximum throughput by executing programs on multiple computers, at the same time. The primary objective of the overall architecture is this: the IOP tasks should be structured to keep the processors busy. (This is not the case in the demonstration system.)

In the demonstration system, the rules (described in the previous paragraph) will be implemented through a combination of work flow control and the task lattice (see below), and through a data base owned by the operating system. Because the rules are not as rigid, no lattice is required. The overall flow of work and data through the applications will be the same as in the past. But the unique characteristics of the S/370 3083-BX processor, its speed and memory, combine to simplify the synchronization and binding of work to software and hardware. In place of a lattice, a set of tables will be generated at system generation time that define the number and priority of each application task and the resources (such as I/O devices) that each task will need. After system generation the scheduling and dispatching of tasks will occur automatically without regard for processor availability or priority. While the current system, tasks wait for work and execute without the constraint of maximizing system resources.

Monitors and Operating Systems

The supervisor we have chosen to control the execution of the ARTS applications is MVS. MVS is a general purpose operating system, unlike the MPE, the NAS Monitor and Host Monitor, which are monitors.

[illegible] special-purpose supervisors written to [illegible] the execution of [illegible] a specific environment, for example, run air traffic control [illegible] 9020. They require special tools to build, they are not adaptable to [illegible] and operational environment, and the applications interface is [illegible].

[illegible] provide a complete data processing environment. Typically, the [illegible] support a wide variety of hardware models [illegible] within the operating system [illegible] UNIX [illegible] management [illegible]

[illegible] kernel [illegible] buffer management, secondary storage support, etc. [illegible] constellation of support services that make it adaptable to [illegible] environments. Supporting these services are a number [illegible] The following list identifies the primary services and the [illegible] them (there are others):

[illegible] - RACF

[illegible] - JES

[illegible]

[illegible] management - IMS, CICS, DB2 (SQL)

[illegible] development - TSO

[illegible] systems - RTX, Ada

[illegible] for realtime systems is limited. IBM has concentrated its operating [illegible] for realtime systems in the Federal Systems Division. A realtime [illegible] was developed by FSD-Houston in the 1960s to support space missions. [illegible] 1980s the growth in realtime systems, or modernizing existing [illegible] an effort to provide a general purpose control program. The

original Houston control program was modified and called RTX. It is now in use supporting several larger-scale realtime systems for NASA and the U.S. Air Force.

RTX is a small set of programs that allows realtime applications to run under control of MVS -- not unlike TSO, which allows MVS to support interactive development. Because the processing constraints of realtime systems are greater than those of most batch systems (data base, etc.), RTX is markedly smaller and faster than either of the programs listed above. RTX provides another layer of task, storage, and I/O control in order to significantly limit the overhead of system services. By using data supplied at system generation time, RTX can determine, at the moment it is running, and by examining the application's priority, whether the following chart of a new message. The routines include the dispatcher, services requested by the application, any interrupt processing, and special commands. The handling and passing of the service request by the dispatcher, the processing of the request by the supervisor, any tasking which may occur, and the return to the application program after the service request. The timings do not include time the application is spent waiting to be dispatched. The timings are average times over several runs, they represent trends.

AVERAGE PROCESSOR TIMINGS (usec)

Function	MVS	with RTX
Dispatch Mgmt	755	64
[illegible]	1183	47
Task Management	1864	194

[illegible] RTX [illegible] is developed [illegible] the [illegible] of the API [illegible] implementation [illegible] application program [illegible] The application program [illegible] determination, message (between the application tasks) control [illegible] that the application programs can be implemented and [illegible] program [illegible] independent of the operating environment as possible.

[illegible] Minimize the Impact of Structural Changes

A realtime application typically contains these parts:

- An interface to the supervisor to receive work and send it to another application asynchronously
- An interface to the supervisor to acquire internal data processing services, such as time and memory, while performing at a real world pace
- An interface (through a supervisory access method) to request I/O services, including the check-pointing of data for recovery
- An interface with a data base that ensures a deadlock-free and coherent system state
- The algorithms that perform the functional capability.

In transporting the ARTS applications from an IOP architecture to a S/370, our objective is to isolate the algorithmic part of each application as much as possible, thereby maximizing source code traceability from one system to the other. We have achieved this through architecture and design.

The applications software topology is an internal network, much like a system that is functionally distributed across different processors; in this case the processors are internal tasks. Each task owns the data that it needs; global data is minimal. Tasks communicate with each other similar to processors in a network, through well-defined messages. All I/O requests have been localized in three tasks, interfacing with the input CDR file, the output CDR file and the DEDS.

Deleted

Within tasks, an application receives requests for work in a single program called a gateway. (The model for a gateway is provided below in "5.2 Operational Software Architecture Definitions and Rules".) The gateway interfaces with RTX to receive work and call the appropriate application routine to process the work.

Rationale for Application Software Changes

The following chart summarizes the rationale for changing each of the major ARTS application tasks being converted. There are five factors that may change the structure and content of a task:

- (1) Operational constraints: the demonstration will operate in test mode with additional constraints; unlike the field system, we will not support recovery, we will not allow operator inputs during the run, etc. (refer to "3.0 Software Requirements")

- (2) Functional requirements: the demonstration system will not develop all the functions (as described in a particular NAS MD) specified for a functional area (refer to "3.0 Software Requirements")

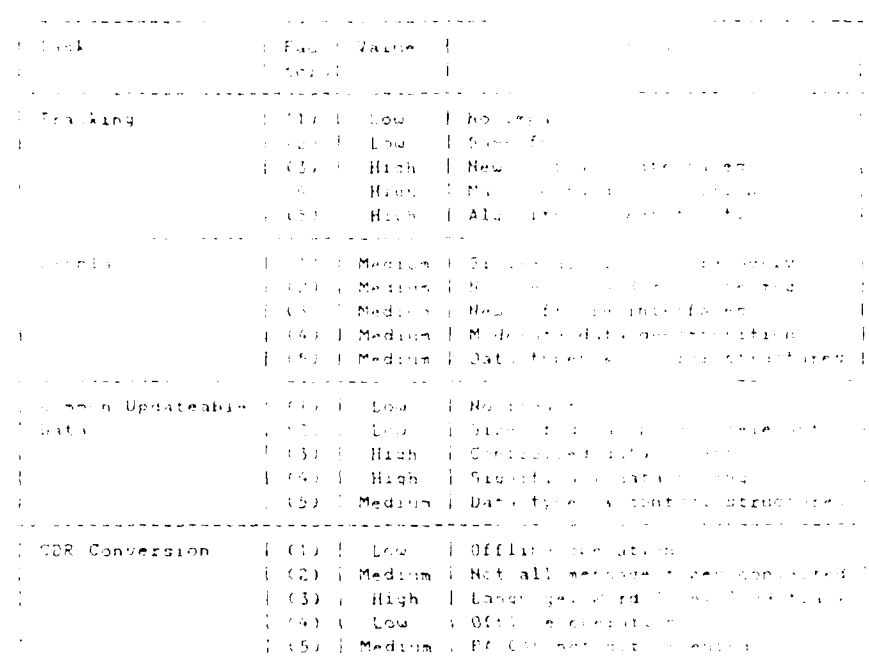
- (3) Architecture: as described above, there will be changes due to the impact of a new system and software architecture

- (4) Ada design: Ada enforces design properties that may or may not be congruent with the design properties resulting from the original HOL TRACON software design

- (5) HOL (Pascal/VS): the effects caused by the recoding of ULTRA source code into a high order language

Each change is assigned a value of high, medium or low. If the change is assigned a value of low, it means that the rationale for change, such as a different architecture, is not much of a factor in creating that application. If the value is high, that particular rationale for change is a significant factor. The value high, medium or low is not related to how well the resulting design protects against future changes in each of the areas; on the contrary, because of the steps which have taken to host the applications in an environment that makes them easy to modify or portable, the value with respect to future changes would be low.

Task	Factors	Value	Rationale
CDR Editor	(1)	Low	Operational concepts: similar
	(2)	Medium	Fewer report types
	(3)	Medium	In S/370 environment
	(4)	Low	Minimal data decomposition
	(5)	Medium	Data types & control structures
Retrieval	(1)	Low	Operational concepts: similar
	(2)	Low	Fewer report types
	(3)	High	S/370; software interfaces
	(4)	Medium	Data hiding concepts
	(5)	Medium	Data types & control structures
CDR Extraction	(1)	Medium	No recovery from data loss; dist
	(2)	High	No filtering; extraction in appl
	(3)	High	S/370 standard I/O interfaces
	(4)	Low	Minimal data decomposition
	(5)	Low	(2) and (3) require recode
DEDS Access	(1)	Medium	No keyboard; no backup
	(2)	Low	Similar functions
	(3)	High	New technology display
	(4)	Low	Minimal data decomposition
	(5)	Medium	Will use AL and Pascal/VS
Interfacility	(1)	Medium	No ARTCC interface
	(2)	High	Markedly reduced functions
	(3)	Medium	New software interfaces
	(4)	Low	Minimal data decomposition
	(5)	Medium	Data types & control structures
Keyboard	(1)	Medium	No keyboard
	(2)	High	Reduced functions; no KIF
	(3)	Medium	New software interfaces
	(4)	Low	Minimal data decomposition
	(5)	Medium	Data types & control structures
PSRAP	(1)	High	No SRAP; no recovery
	(2)	Medium	Reduced functions
	(3)	Medium	New software interfaces
	(4)	Low	Minimal data decomposition
	(5)	Medium	Data types & control structures



Rationale for a Formal Architecture

The next section describes the [illegible] are [illegible] that [illegible] are precisely enough to analyze and verify [illegible] but is committing to an implementation architecture [illegible] which are in need of design as much as individual modules.

The definitions and rules that follow define the [illegible] the operating environment (MVS, Pascal/VS [illegible]). The architecture must stand on its own as a working model [illegible] implementation criteria imposed on it by the tools. So the next section is a mapping of the intended behavior to the implementation tools MVS, [illegible] Pascal/VS.

5.2 Operational Software Architecture Definitions and Rules

Introduction

Software architecture describes the mapping of system application work and system operations work to the software. The architecture should answer the questions: What are the units of work and the units of software, including the major data bases? How are the work units allocated to the software units? How is the work synchronized? How do the software units communicate with each other? And how do they carry out their work using available data processing resources, such as the processor, its storage, and I/O channels.

Scope

The description that follows defines the structure and behavior of the online system (see definitions). The offline work, identified below, will be performed in a standard, batch environment. We are not developing any software to control the flow of work through the offline system; the software architecture is provided commercial-off-the-shelf, viz., VM/SP and MVS

There are two types of work required of the New York TRACON software system: applications and operations (the work required to start, monitor and control, and terminate the system, regardless of the application).

The description of the software architecture pertaining to system operations (see definitions below) is limited; the text concentrates on the software architecture of the applications work and the software services required to perform it. The New York TRACON demonstration system's support for system operations is limited to the capabilities provided by the commercial-off-the-shelf operating system, MVS. MVS provides the capabilities to allow the operator to start and terminate the system.

Objective

The objective of a realtime system software [illegible] as possible the rules for software decomposition in the developmental design for sequential design (s), for concurrent design (c), and for system performance (p) while modeling as closely as possible the behavior of the real world. The rules will state the invariant conditions between d, s, c, and p; the rules for [illegible], example, should not be defined without regard for their impact on the rules etc. There should be as few rules as possible, when stating all the invariant (defining a rule that all modules shall execute correctly satisfies the condition but avoids entirely the second).

The New York TRACON demonstration system software architecture -- the rules for s, c and p -- is defined below in more application and method specific terms. The developmental design is described in terms of levels of Ada packages; the sequential design in terms of what defines a TRACON Ada package -- which requirements are clustered within each package; the concurrent design in terms of subtask software messages -- both of which will be described later in more general terms; and the performance in terms of S/370 MVS, and RTX behavior.

Definitions (in alphabetical order):

- Ada package: a software unit that has a specification part and a body that defines an abstract data type and behaves as a state machine

- Applications: the ARTS work exclusive of operations, tracking for example; the software that automates that work

- Application messages: unit of data through which the system and the real air traffic world communicate: beacon and radar targets, tracks and flights

- Application [illegible] containing system application messages, that define the processing constraints of the software; a process must complete one system application work unit, such as a track, before starting the next.

- Application work station command: an integral input from the system application work station

- ARTS: system that automates the work of TRACONs and their associated towers, Automated Radar Tracking System.

- Batch mode: execution of an offline program non-interactively.

- Concurrent design: the rules that describe how subtasks (see below) interact as they compete for system resources (processor, channels, data, etc.).

- Controller command: a keyboard action from the DEDS

- Controller sector: an area of real airspace mapped onto display coordinates that composes an application work station.

- Conversation: Two-way communication between processes.

- CDR: continuous data recording (logging by category).

- CTS: central track store (the set of track records).

- DEDS: ARTS data entry and display subsystem.

- Flight: the set of data that defines and characterizes an aircraft controlled within ARTS.

- Gateway: a set of programs and data that provide the concurrent interface control for a package.

- Interactive (I): a process initiated by an external input that may interrupt and modify the flow of data through the system.

- Interactive application work station: the device (the DEMS) including hardware and software), functions and people that interact with the system to create, observe, modify or delete system application work.

- Level-1 package: the top level software parts that compose the monitor and application software. In sequential design, the Ada packages that define the top level abstract data types in the system's design, the subtasks (see below).

- Level-2 package: an implementable module that decomposes from a level-1 package.

- Monitor: a set of programs and data that provide data and control synchronization for the software system without knowledge of the application.

- MVS: IBM's batch operating system.

- Online: a run (or execution) of the New York TRACON operational [illegible]. The online system runs under MVS RTX.

- Offline: a run separate from an online run; a data processing job that runs under MVS (but not under RTX) or VM.

- Operational mode: running the ARTS with live target and live [illegible] interaction -- as it would be run in the field.

- Operations: work required to run the system (hardware, software and human interface to them); the software that automates that work, such as the online operating system.

- Operations messages: units of data through which the system and the humans or machines running the system communicate.

- Operations work: units of data containing system operations messages.

- Operations work station: The device (including hardware and functions and people that interact with the system to create, observe, modify or delete system operations work.

- Pipeline (P): a set of processes that execute in order: process A produces data for process B and so on.

- Process: the execution of a subtask that operates on a unit of application work.

- RTX: IBM control program running under MVS to provide realtime services to applications running under it.

- Second-order messages: application messages that modify the state of a track or a flight

- Sector: a subset of an antenna scan; there are 32 sectors per scan; a sector's worth of tracks or targets.

- Sensor: a unique radar antenna; a full antenna scan of targets.

- Sequential design: the decomposition of the software system into parts and their [illegible] in such a way that it is deterministic and without regard to [illegible]

- Software message: [illegible] of data through which packages communicate.

- Subtask: a set of applications software that operates independently, and is dispatchable under MVS-RTX, the binding of a work unit to a level-1 package

- Targets: a set of beacon and radar messages.

- Task: the automatic execution of system work under the control of an operating system that allocates and monitors all the system resources (channels, devices, memory, programs etc.) required to perform the work.

- Test mode: running the ARTS system using simulated targets, flights, and controller commands.

- Track: a computer model of an aircraft's position and velocity. -- maintained in real world and display coordinates; a dynamic record of the aircraft's behavior.

- Type: a specification of the operations that can be performed on a set of data.

- Work hierarchy: a tree of categories of work units; categories are numbered from 1 to n, where 1 is at the top of tree.

Packages and their Attributes:

The figure below describes 10 application [illegible] 2 monitor, and 1 offline the CDR Editor; and 3 monitor (MJ) packages [illegible] Initialization/Termination, 2) Message Control, 3) Timing Control.

(The Level-1 Ada package name is noted [illegible]

Monitor Packages:

The Initialization and Termination package will [illegible] initialization and termination to synchronize startup and shutdown.

A pair of services, Send and Receive, will [illegible] communications between subtasks. Send and Receive will be provided in the Message Control package that provides communications error checking and [illegible] services for synchronization and buffer management.

Timing Control will ensure that all system work completes on time as it moves through the system, and will provide timer [illegible] from other packages.

Initialization/Termination	(IM[illegible]
Message Control	(IM (CCCC))
Timing Control	(IM [illegible]

Application Packages:

The application packages decompose the New York ... SAGE demonstration system at the top level. Level ... Each of these is a process in a one ... to ... packages.

There are 5 classes of application packages, each with specific attributes:

- Offline
- Interactive
- Pipeline
- Data
- Control

Offline: the offline package, the CDR Editor, runs remote tests from the operational software. It runs under VM ... under DMS. It ... is written in ... operational execution as input and generates ... output.

The offline package, CDR Conversion, converts the input CDR tape from 9-track ULTRA format to Fascal/VS format readable and processable by the demonstration system.

CDR Editor	(TM04$$$$)
CDR Conversion	(TM14$$$$)

Control: There are three control packages:

Master	(TM05$$$$)
CDR Extraction	(TM06$$$$)
DEDS Access	(TM07$$$$)

Although each package has unique attributes, the overriding attribute that binds them is that they are responsible for controlling the applications work, its synchronization and flow, as it interacts with I/O devices.

The DEDS Access software will be largely commercial off-the-shelf; a small part of it will be developed.

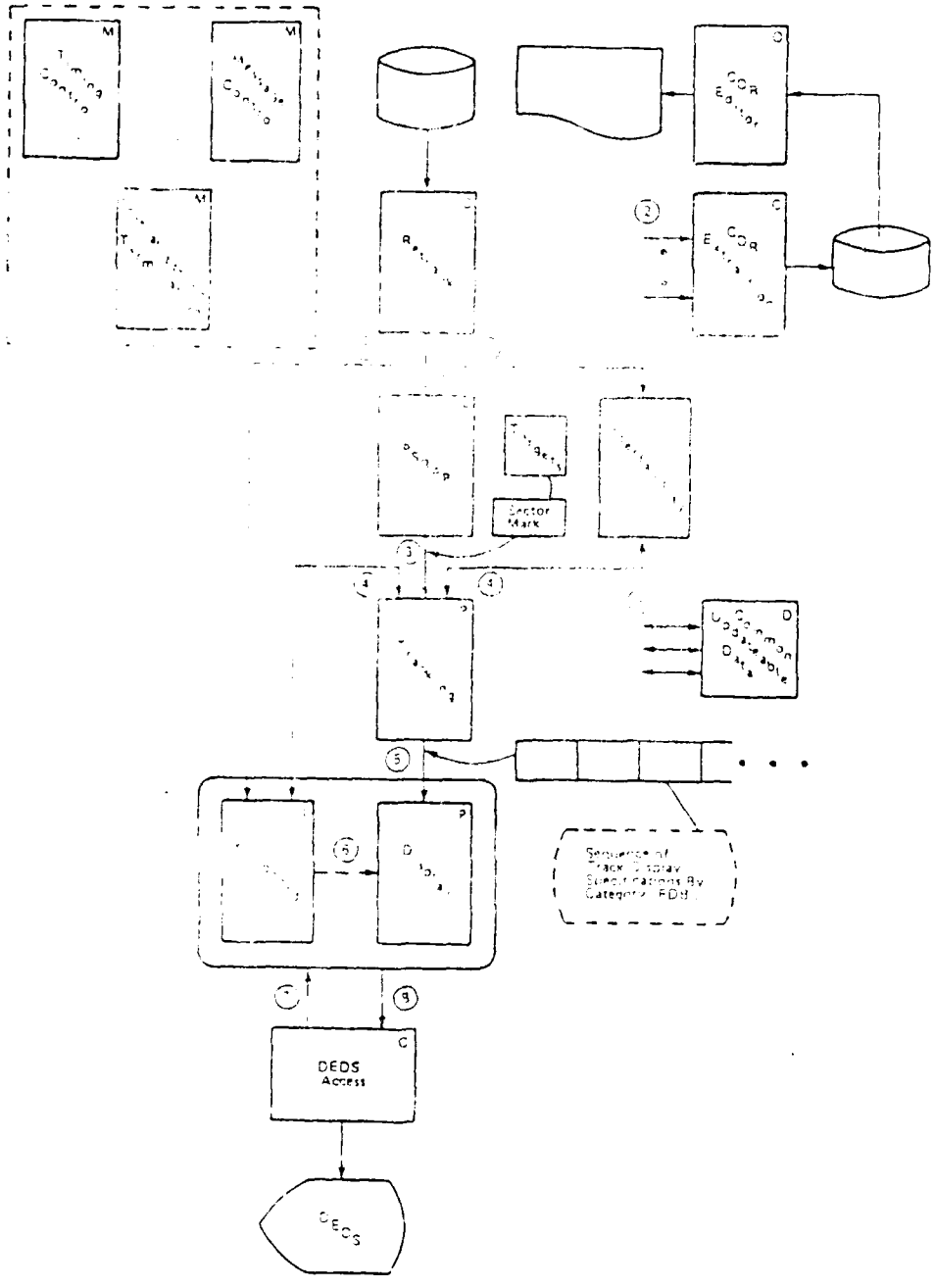
Interactive applications packages that can run as processes and receive their input only from Control packages. They process application work without knowledge of Control and Data operations and can access Data packages concurrent with Pipeline packages and other interactive packages. They may converse with pipeline packages: the ... Request P...

Interfacility
Keyboard

Pipeline applications [illegible] that [illegible]
Control package or another Pipeline pa[illegible]
packages and can access Data packages
Interactive packages. Pipeline packages [illegible]

Target Acq[illegible]
Tracking
Display

[illegible]



New York TRACON Demonstration Operational Software Architecture

Rules:

I. System Work

- The demonstration system will run in test mode. No jobs will be permitted into the system except from the CDR input file[illegible] execution.

- The indivisible units of system [illegible] application messages: - targets ([illegible]

- The work hierarchy for the system application work is:

    1 - CDR record

    1 - controller sector

    1 - application work station command (command)

    1 - TRACON airspace

    1 - sensor

        2 - sector

            3 - target

            3 - track

            3 - flight

- In test mode, CDR records -- containing the scenario data, the track flights, etc., from an earlier run -- are read from a CDR file [illegible] and new CDR records are generated by the application [illegible] file, periodically during system execution, by the CDR extract

- A controller sector is a subset of a sensor's airspace [illegible] application work station. It represents the set of tracks sent within a sensor that are eligible for display.

- An application work station command is a message [illegible] In test mode the commands will be read from CDR records and [illegible] directly to the Keyboard package; in operational mode commands [illegible] directed to Keyboard from the DEDS Access package.

- A sensor represents the targets (and other messages) that are [illegible] through a SRAP from a single antenna. The internal representation target and track data will be sorted by sensor.

- A sector is 1/32 of an antenna sweep -- all the targets and tracks that lie within that wedge. The internal representation of target and track data will be sorted by sector.

- In operational mode, targets enter the system through a SRAP, as a continuous sequence of messages; in test mode, the messages are read from CDR records.

- Tracks are created automatically by the tracking software -- as a result of the receipt of a discrete beacon report (called automatic initiation) or as a result of a track handoff from an adjacent ARTS or NAS facility -- or manually, by human command. In test mode, tracks will be automatically initiated or will be read from CDR records simulating the interfacility and keyboard inputs.

- In operational mode, flights enter the system from an adjacent facility or through a batch (bulk) sequence of pre-defined flight plans, or manually, by human command. In test mode, flights will be read from CDR records simulating the interfacility and keyboard inputs. (In test mode, bulk flights could be read from a tape as they would be in operational mode; but, for the demonstration, there will be no bulk processing.)

- Sensors, sectors and controller sectors contain integral target and tracks.

- CDR records contain integral targets, tracks, flights and work station commands.

II. System Parts and their Work

- There will be six classes of level-1 [illegible] (see below).
  - •• Monitor (M)
  - •• Offline (O)
  - •• Control (C)
  - •• Interactive (I)
  - •• Pipeline (P)
  - •• Data (D)
- The Initialization and Termination package (M) will synchronize t[illegible] startup and shutdown by sending and receiving notification [illegible] messages to and from the other packages. It will process [illegible] requests to start and stop the job. (In operational mode there would be an interactive interface with the operator; in test mode, the operator will cancel the MVS job and there would be no interaction [illegible] package.) If the run is terminated gracefully for other reasons a processing timing parameter is exceeded, this package will be [illegible] Its retained data will include the names of the other p[illegible] information about their processing states.
- Message Control (M) will field the communications primitives issued by other packages and interface with RTX to provide the appropriate space) resources.
  Deleted
- Timing Control (M) will periodically determine if the pipeline deadlines are being met; if they are not it will record the event.
  Its retained data will include the critical system events and [illegible] elapsed times for each. It will terminate processing if a crit[illegible] does not occur within the expected time. It will provide [illegible] services to the other packages.
- The offline package, CDR Editor (O), will execute in batch mode under VM. It will read the CDR (output) file (on [illegible] or c[illegible] and generate a listing of the online system's journal. The listing will show that the demonstration system functions are equivalent to those in the current New York TRACON system.
- The offline package, CDR Conversion (O), will execute in batch mode under VM. It will read the CDR (input) file and convert the CDR messages from ULTRA format to PASCAL format. All fields in messages processed by demonstration system will be converted. Time will be converted from 1/1024ths of a second to 1/1000 of a second (milliseconds).

- The online application packages and their primary work units are:

  DEDS Access (C) == Software messages
  Retrack (C) == CDR records
  CDR Extraction (C) == CDR records
  Interfacility (I) == Flights
  Keyboard (I) == Controller commands
  Target Acquisition (P) == TRACON airborne
  Tracking (P) == TRACON airborne
  Display (P) == Display generator commands
  Display generator commands
  Display generator commands

  Deleted

- The DEDS Access package provides -- through commercial off-the-shelf and developed software -- the link level I/O support between the Display Outputs application and the DEDS. Because controller commands (keyboard inputs) will be input from Retrack only, DEDS Access will support outputs only. DEDS Access will use MVS services to provide channel- and interrupt-level I/O support. It will retain data about the DACU and the display generator protocol.

- Retrack will read the CDR tape containing the recorded transactions from a previous execution of the full ARTS system (not our demonstration system). Retrack will read target, controller command and flight records into its internal buffers and pass the target records to the Target Acquisition package, the commands to Keyboard, and the flight data to Interfacility. Retrack will not pass work that has already been identified on the CDR tape as in error. Retrack will send second-order messages, modifications to existing flights and tracks, to Interfacility and Keyboard. If the messages are out of sequence they will be recorded as errors on the CDR output by Keyboard or Interfacility. (Retrack will not interface directly with the CTS as in the current New York TRACON system.)

- CDR Extraction will receive software messages from the other online packages, transform them to CDR records and write the records to the CDR (output) file using a standard MVS access method.

- Interfacility will receive flight data from Retrack. It will check for applications errors (such as out of sequence second-order messages) and send software messages containing track-related fields to Tracking. Tracking will ensure the coherency of the values sent in the message (with respect to the current data retained within Tracking) and either commit the data and return a success indicator or not commit the data and return an error indicator.

- Keyboard will receive flight data from Retrack. It will check for applications errors (such as out of sequence second-order messages) and send software messages containing track-related fields to Tracking. Tracking will ensure the coherency of the values sent in the message (with

respect to the current data retained within Tracking) and either commit the data and return a success indicator or not commit the data and return an error indicator.

- Target Acquisition will determine the sector boundaries and sort the target data by sensor--sector, sending the data (sector data and target data) to Tracking.

- Tracking will perform automatic acquisition, discrete correlation, standard correlation, smoothing, and prediction, track termination, inter-sensor linking. Tracking will receive its inputs from the Keyboard and Interfacility. It will create a sequence of software messages containing the application work station and data for each eligible (for display) work station. Tracking will maintain the sensor-sector data base, the target data base, the tracking data base, the (CTS) Beacon Only Table (BOT), the Radar Only Table (ROT) and the Correlation Address Table (RAT) -- that defines the mapping of CTS entries to target entries and vice versa -- within its package.

- Display will output to the DEDS full data blocks for associated tracks, limited data blocks for unassociated tracks, partial data blocks, tabular lists and some system data, such as time. It will control the positioning or offsetting of data blocks if they overlap on the display. Display will receive a sequence of messages from Tracking for each work station eligible for display updating. Timing Control will send the update time to Display. Display will access non tracking data from the Common Updateable Data package. Display will maintain internally the data that describes the model for all outputs at each level of protocol and the data necessary to convert internal information for a display to pass it to a DEDS monitor. Deleted.

III. The Decomposition of Parts

- Level-2 packages will decompose from Level-1 packages.
- The relationship between a Level-1 package and its Level-2 packages can be one-to-one or one-to-many.
- Level-2 packages will provide type management for the data refined or decomposed from the Level-1 retained data; for example, a Level-2 Tracking package would control the access to RAT.
- Level-2 application packages will work on integral units of system application work.

IV. Tasks and Concurrency

- A subtask will execute independent of and concurrent with other [illegible]
- All Level-1 application packages will map one-to-one onto a subtask.
- Deleted.
- Level-2 application packages will execute sequentially within a subtask
- Message Control will ensure that all subtasks are synchronized [illegible] Send and Receive primitives
- The synchronization of a Level-1 package (a subtask) with other Level-1 packages will be centralized in a single Level-2 package, if the mapping of a Level-1 to -2 package is one-to-many, or in a single procedure, if the mapping is one-to-one. The single procedure or package is called a gateway. (See Section VII for the mapping to Pascal programs.)
- A subtask will, if possible, request all the data that it does not own (encapsulated by a D package) prior to executing its sequence of algorithms.
- Subtasks need not queue work (work queuing will be provided by PTX -- see below) unless it is required by the Level 1 package, such as Common Updateable Data queuing requests to update the same data.

V. Communications Between Subtasks

- Monitor (M) packages may communicate and converse with any subtask.
- Control (C) subtasks may communicate and converse with any subtask.
- Data (D) subtasks may communicate and converse with any subtask.
- Pipeline (P) subtasks may converse with Interactive (I) subtasks (P <--> I).
- Pipeline subtasks may not converse with other Pipeline subtasks (P <--> P); they may direct work only to the "next P" subtask in the pipeline.
- Interactive subtasks may not communicate with each other (I <--> I)
- Only Control (C) subtasks may perform requests for I/O
- All subtasks will communicate through the same means, using Send and Receive commands via Message Control.

Sends:

- There will be 6 categories of Sends:

  1) Sends that start a process and do not converse

  2) Sends that start a conversation (they start a process and ask for a response)

  3) Sends that end a conversation by responding to a waiting subtask, and

  4) Sends that schedule an event (to initiate a process) at a delta time from the present

  5) Sends that schedule a cyclic event

  6) Sends that schedule an event (to initiate a process) at absolute time in the future

- A Send to a Data package represents a request for data
- Send will pass data contained in a communication packet.
- The communication packet will consist of a header followed by the user record.

- The header portion of the record will contain the sender, receiver and record identifier (command).

- The command will imply the specification of the user record and the order of the values that follow.

- The user record may be a buffer.

- A buffer is a one-dimensional array containing no meta-data, no data about the data in the array; for example, a buffer may contain a sequence of target reports. (A reminder: arrays are fixed-length.)

- A record passed in a Send is transient; permanent records reside in a primary or secondary storage data base (see "Data Base and Data Coherency" below).

- A user record may contain a sequence of records.

- All types in a sequence must be of equal length.

- Transient records can not be recursive; the type field can not be followed by a type field.

- Examples of illegal transient records:

  Illegal

  1. A sequence of one record
     <LDB> <LDB> <field_a> <field_b> ... recursion

  2. A sequence of two records
     <TAB> <field_a> <field_b>
     <TAB> <field_a> <field_b> <field_c> variable length

  3. A sequence of one record
     <field_a> value-only --
                no type name

- Conversational Sends (categories 2 and 3) will be modelled as either a

  (1) procedure call -- the passed values will be processed by the receiving package and a value indicating the success of the operation will be stored by the "return" Send; or as a

  (2) function -- the type defines a set of values that will be returned by the "return" Send; (Example: a sending package requests a D package to return a named record; the type field is the name of the transaction -- e.g., read, and the name of the variable, the remaining fields in the record specify the sequence or implied hierarchy of values to be returned by the D package).

Receives:

- When a Package is invoked, it issues a Receive to obtain its communication packet. The communication packet may contain :
  - a Send from Initialization and Termination to startup or shutdown
  - a Send from another package of buffer data or records.

Reliability:

- Message Control will type check the Send command and the
- Each package will type check records; buffers need not be type checked.
- No link-level protocol will be implemented to ensure that receiving packages receive sent data -- the demonstration system is providing minimal realtime recovery.

The Send and Receive commands:

Legend:
<> defines a component
() means it is optional
| is an "or" symbol
::= means is replaced by

<Send> <Category> <From_task> <To_task> <CMD> <Record_address>
<Record_length> <Timed attribute>

<Timed attribute> = non-zero if category is 4,5,6

<Receive> <Address of communication packet>

VI. Data Base and Data Coherency

- The data base comprises sets of records
- Data sets can be in primary or secondary storage.
- There will be 5 categories of data:
  - read-only data such as system and site parameters; these data will b directly accessible by each package
  - retained data encapsulated by a P, C, I, or M package that provides synchronous data base services within the subtask (the Le package state data), or within the Level 2 package
  - local variables, required by the various Level-2 package proce
  - records on secondary storage devices
- Each data set, except local variables, requires a header to identif the data set.

VII. Executing the Online System under MVS and PTX with Pascal

Building the System

The system is built and initialized for execution under RTX using tables created [illegible] execution. Job Control Language (JCL), which is [illegible] at execution [illegible] specifications to RTX patterned as part of the [illegible]

[illegible] datasets must be created pre initialization.

- [illegible] that comprise the TRACON application.
- Mappings and tables to be used by RTX in system initialization.

  The Master Communications Vector Table (MCVT) is a COPY source member maintained by RTX. The MCVT is used to define Subsystem Communications Vector Tables and Initialization List Tables and is used in the assembly of application programs.

  The Subsystem Communication Vector Table (SCVT) is a COPY source member composed of macro and assembly language statements. The SCVTs are used to define Initialization List Tables (ILTs).

  Initialization List Tables (ILTs) contain information required to configure the execution. They contain the names of all load modules, work queue definitions, links to be initialized, buffer pool definitions, and work server definitions.

- Job Control Language is used to specify the RTX version and to specify the data set names containing the MCVT, SCVTs, ILTs and load modules to the MVS batch initiation system.

- [illegible] input control commands are part of the input stream to the RTX job and select options to be used during a particular execution.

Linking Packages

- A copy of Message Control will be linked to each application load module.

- Timing Execution Control will be implemented in the bridge of each task. (Each task contains a bridge that is the entry point for that task. The Pascal Gateway is a reentrant procedure that is invoked from the bridge.)

- A copy of Timing services will be linked to each application load module.

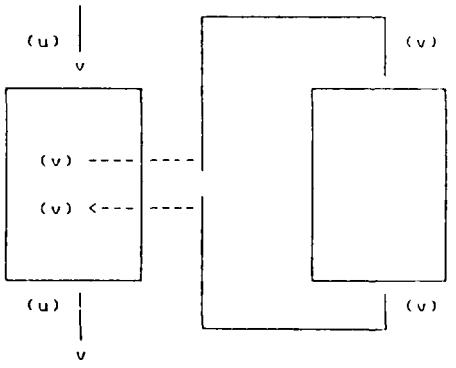
- Initialization and Termination will run as a subtask.

Load Modules

- Each subtask will be an independent load module.
- The entry point for each load module is contained in a bridge for the load module.
- The bridge contains data used by Timing Execution Control.
- The bridge passes a pointer to the task's state data to the gateway.
- The bridge is written in Assembly language and is not reentrant.
- The Gateway is a reentrant Pascal routine.
- RTX will be in an independent MVS address space.
- Each load module will have only a single entry point.
- A copy of the read-only data will be linked to each load module.
- A copy of the Pascal run-time modules will be linked to each load module.

Subtask Communications:

- Subtasks will communicate asynchronously. (In the case of conversational Sends, communications will take place through a combination of synchronous and asynchronous RTX services.)
- Subtasks will communicate (u) and converse (v) in the following manner, with respect to enter and exiting load modules:



- The Send implementation uses the following RTX services:
  - GKENTER, GKEXIT - standard entry and exit linkage
  - GKQWORK - queues a unit of RTX work on an RTX server
  - GKBLOCK - [illegible]
  - GKISSUE - [illegible]
  - [illegible] - [illegible]
  - GKTIMER - [illegible]
  - GKTIMER - [illegible]
  - GKTIME - returns the current time in milliseconds or hours
  - GKRTAB - pointers to flight/mode table
- Category 2 Sends queue a unit of RTX work on an RTX server and wait for completion of the work. This is a synchronous work request. Information to satisfy the work request will be placed by the invoked task into a work server buffer acquired by the requesting task at initialization.
- Category 3 Send will respond to a category 2 send by moving the requested information into the requestor's buffer. RTX will inform the requesting task that the work request is complete when the task containing the Category 3 Send terminates. This is a synchronous work request.
- Categories 4, 5 and 6 queue work on a work server to execute at a specified time in the future.
- Receive will be used by an application package after a category Send to locate and access the data placed in the Work Queue buffer by the originator of the Send.

The Relationship of Ada Packages to Pascal Compilations:

- A Pascal load module comprises a single Main program and some number of nested levels of procedures. The Main program controls and manages the interface to other Pascal load modules and the interfaces within its load module. In short, Pascal presumes a hierarchy of programs within a load module. The demonstration architecture presumes that a load module contains a network of Ada packages (or a single node), each comprising a small set of procedures.
- Because a Level-1 Ada package (a load module) may decompose into one (the single node case) or more Level-2 Ada packages, and Pascal/VS expects the relationship of a load module to a Main program to be one-to-one, the relationship of Level-2 Ada packages to Pascal programs may vary:

Single node case:

- If a Level-1 Ada package decomposes into only one Level-2 package, the Gateway will be the Pascal Main program and its subordinate Pascal procedures will be equivalent to the Level-2 Ada procedures.

Multiple node case:

- If a Level-1 Ada package decomposes into more than one Level-2 package, the Gateway will be the Pascal Main program -- as in the single node -- and its immediately (the first level of nesting) subordinate Pascal procedures will be equivalent to the Level-2 Ada packages. The procedures nested under the first level procedures, then, will be equivalent to the Level-2 Ada procedures.

Primary Storage Management:

- Primary storage (an RTX buffer) will be allocated to each task during the first execution of the task (at initialization time).
- Each time the task is subsequently entered, the bridge for the task will obtain the pointer to the buffer and pass it to the gateway for the task.
- The data that exists across executions of the task is State data.
- Variables created by any procedure within a package will be allocated when the procedure is invoked and released when the procedure exits.
- As part of the Send processing,a task will acquire a work queue buffer to be used by Send and Receive.
- All primary storage will be deallocated at task termination.

Secondary Storage Management:

- A CDR input file, in IBM external and internal format, will be resident on DASD at the start of the online run.
- A CDR output file, in IBM external and internal format, will be resident on DASD at the end of the online run, and it will be accessible to the CDR Editor, running under TSO.
- A LOGREC file will be available at the end of the online run.
- An RTX log file will be available at the end of the online run.
- There will be no system parameters or variables maintained in secondary storage.

- There will be no recovery files maintained in secondary storage.

Recording System States and Recovery:

- There will be no realtime recovery.
- There will be five mechanisms for recording information about the state of the system:
  - the processor and MVS will record equipment errors on the LOGREC file
  - the applications will record data for CDP
  - the applications can log an error with RTX and continue
  - the applications can log an error with RTX and ABEND
  - the applications can log an error to a SYSOUT file (this may be available only in debug mode)
- An ABEND may cause the demonstration to terminate

Device Access Methods:

- Applications will interface with the disk and tape devices through standard Pascal/VS services.
- Input/Output facilities in Pascal/VS will use the following OS access methods: Queued Sequential Access Method (QSAM) for sequential data sets and Basic Direct Access Method (BDAM) for random record access. An interface to the Graphics Access Method (GAM) will be supplied by assembler programs residing in the DEDS (Data Entry and Display Subsystem) package.
- A data definition entry (//DD in JCL) will be included as part of SYSIN for the RTX job for the CDR input and CDR output files. Both files will be sequential data sets of fixed length records.
- The Retrack gateway program will declare a file variable that will associate the Pascal/VS internal name with the external data control block (DCB).
- Retrack initialization will open the CDR input file using Pascal/VS RESET statement. A RESET statement explicitly opens a file for input.
- Retrack will use Pascal/VS GET statements to read one record at a time from the CDR input file. Whenever an end of file condition is detected, Retrack will notify the Initialization/Termination package using a Send.

- When Retrack is entered at termination, it will explicitly close the file by using a Pascal/VS CLOSE statement.

- The CDR Extractor gateway program will declare a file variable that will associate the Pascal/VS internal name with the external data control block (DCB).

- CDR Extractor Initialization will open the CDR output file using a Pascal/VS REWRITE statement. A REWRITE statement explicitly opens a file for output.

- The CDR Extractor will use Pascal/VS PUT statements to write one record at a time to the CDR output file.

- When the CDR Extractor is entered at termination, it will explicitly close the file by using a Pascal/VS CLOSE statement.

Software Clock Maintenance:

In the current New York TRACON system, the oscillator speed updates the real time clock at intervals of 1/1024ths of a second. This is updated independent of any monitor or software within the system.

In the recoded system, we will use a software clock that is updated every 100 milliseconds. Since a sector mark on an antenna is crossed every 125 milliseconds, our analysis indicates that this is adequate for this demonstration.

The software implications of this are that each time Retrack executes, it will send all CDR input records to the proper tasks that have an earlier time stamp than the current time plus 100 milliseconds. It will then schedule itself for execution in 100 milliseconds.

A further consequence is that CDR records recorded during the demonstration run will be time stamped with the software clock time. That is, data recorded for a single antenna sweep will contain 32 different time stamps. The time stamp will differ from records recorded during a CDR run on the New York TRACON system.

A.0 New York TRACON A5.04 Data Dictionary

The Data Element Dictionary (DED) contains all the global data element names and descriptions. The main purpose of this DED is to define the usage of global elements and provide for configuration management control of these elements. This control of the data elements, along with their conventions, data typing, data base assignment, and description, enhances communication of information throughout the project.

The Data Element Dictionary may map multiple new names to a data element name in the existing NY TRACON system. This occurs when the UNIVAC 30-bit word is subdivided into halfword and bit variables. The new names comprise the old name with an integer appended; this integer indicates the different variables in the word.

The DED is maintained using the PC program dBASE III Plus. The structure of each record is as follows:

- COMPANY - the company responsible for coding the data element (D - DTC, I - IBM, P - PJA)
- DATANAME - data element name (for the existing NY TRACON system)
- data base - data base name (for the existing NY TRACON system)
- PAGENUMBER - page number in NY TRACON Coding Specs (for the data base) that describes the data element
- P1 - procedure name that references the data element

  There are up to 10 procedure names; if more than 10 procedures set or use the field, additional lines (with DATANAME, data base, PAGENUMBR, TYPE, VARNAME, DBNAME, NEWPGNUM, and DESCRIPTION duplicated) are used
- S1 - indicator specifying whether the procedure sets and/or uses the data element

  There is one S indicator for each valid procedure name

  Valid settings of the S field are:

  - 0 - Not available
  - 1 - set by referencing procedure
  - 2 - used by referencing procedure
  - 3 - both set and used by referencing procedure
- TYPE - data element type code

Valid settings of the type field are:

- S - character string
- C - character
- L - boolean
- i - integer (short)
- I - integer (long)
- r - real (short)
- R - real (long)
- B - bit
- A - array (table)
- P - pointer (address)
- E - enumerated type

- VARNAME - new data element name
- DBNAME - new data base name; currently used to describe the task that will own the data element

Valid settings of the data base name are:

- NA - Not recoded
- ? - Don't know original data base, don't know new data base, etc.
- PSRAP - PSRAP
- TRACK - Tracking
- KBD - Keyboard
- DISP - Display
- IFY - Interfacility
- SPARM - Global System and Site Parameters
- SYSTEM - Global Parameters that are not System nor Site Parameters

- •• CDR - Continuous Data Recording
- •• RETRACK - RETRACK
- •• MSAW - MSAW
- •• CA - Conflict Alert
- •• blank - haven't worked on yet

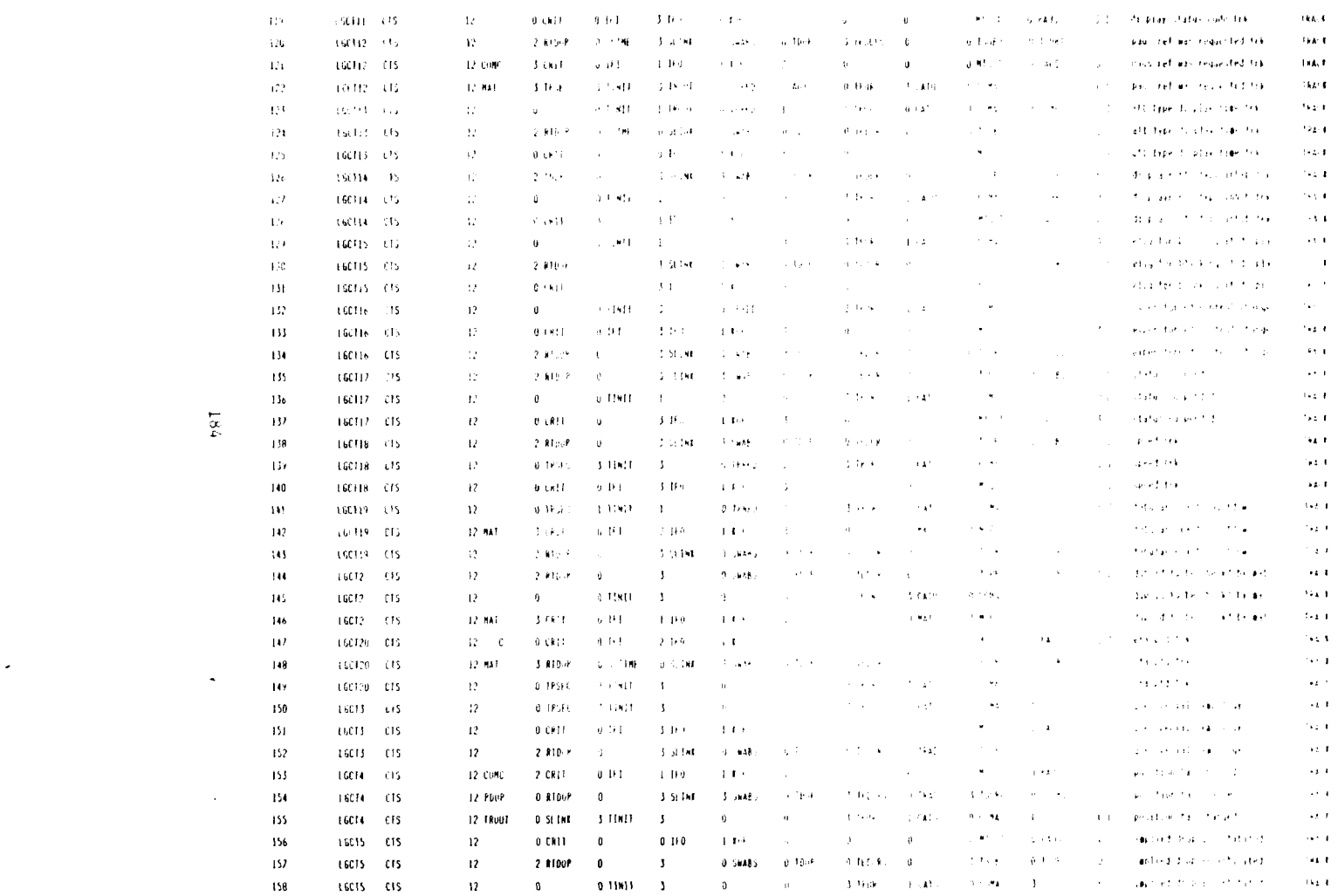
- NEWPGNUM - page number in new data base document describing the data element
- DESCRIPT - data element description

The data elements are presented sorted by data base on the pages that follow.

Record#	COMPANY	DATANAME	DATABASE	PAGENUMBR	P1	S1 P2	S2 P3	S3 P4	S4 P5	S5 P6	S6 P7	S7 P8	S8 P9	S9 P10	S10	TYPE	VARNAME	DBNAME	MEMPLNUM
1		BOTIT	BOT	4	TPUR	1 SUBS	0	0	0	0	0	0	0	0	0	A	bot trk	TRACK	0
2		BOTITI	BOT	4	TPUR	3	0	0	0	0	0	0	0	0	0	I	bot report azimuth	TRACK	0
3		BOTITIO	BOT	4	TPUR	3	0	0	0	0	0	0	0	0	0	I	bot va	TRACK	0
4		BOTITI1	BOT	4	TPUR	3	0	0	0	0	0	0	0	0	0	S	bot beacon code	TRACK	0
5		BOTITI2	BOT	4	TPUR	3	0	0	0	0	0	0	0	0	0	I	bot rep vc	TRACK	0
6		BOTITI3	BOT	4	TPUR	3	0	0	0	0	0	0	0	0	0	I	bot altitude	TRACK	0
7		BOTITI2	BOT	4	TPUR	3	0	0	0	0	0	0	0	0	0	I	bot range	TRACK	0
8		BOTITI3	BOT	4	TPUR	3	0	0	0	0	0	0	0	0	0	R	bot y coord	TRACK	0
9		BOTIT4	BOT	4	TPUR	3	0	0	0	0	0	0	0	0	0	R	bot x coord	TRACK	0
10		BOTITS	BOT	4	TPUR	3	0	0	0	0	0	0	0	0	0	R	bot y dot	TRACK	0
11		BOTIT6	BOT	4	TPUR	3	0	0	0	0	0	0	0	0	0	R	bot x dot	TRACK	0
12		BOTIT7	BOT	4	TPUR	3	0	0	0	0	0	0	0	0	0	A	bot wdw	TRACK	0
13		BOTIT8	BOT	4	TPUR	3	0	0	0	0	0	0	0	0	0	I	bot_firmness	TRACK	0
14		BOTIT9	BOT	4	TPUR	3	0	0	0	0	0	0	0	0	0	E	bot_time_of_last_correl	TRACK	0
15		ABEAT1	CTS	7		0 CRIT	0 DBATM	0 IFI	2 KOF	3	0	0 MSAW	0 MTGCT	0	0	L	last correl on radar only trk	TRACK	0
16		ABEAT1	CTS	7	TEDC	3	0 TINIT	3	0 TPUR	3 TPRED	0 ALTRKR	0 CDR	2 COMA	3 COMB	2	L	last correl on radar only trk	TRACK	0
17		ABEAT1	CTS	7	PSBLD	0 RETRACK	1 SMOTH	0 TEDCRS	0 TI	0 TPSEC	3 TSUBO	0 TSUBI	0	0	0	L	last correl on radar only trk	TRACK	0
18		ABEAT2	CTS	7	TPSEC	3 TCRSS	2 TINIT	3 IFI	3 TPUR	3 TPRED	2 COMA	3	0	0	0	L	initial correl proc enabled trk	TRACK	0
19		ABEAT3	CTS	7	TEDC	3 TCRSS	2 TINIT	3 IFI	3 TPUR	3 TPRED	2 SLIMK	2 TPSEC	3 RETRACK	2 KOF	3	E	assigned beacon code trk	TRACK	0
20		ABEAT4	CTS	7	TPSEC	3 COMA	3 TINIT	3	0 TPUR	3	0	0	0	0	0	I	constant zero trk	TRACK	0
21		ABEAT5	CTS	7	TEDC	3 TCRSS	2 TINIT	3 DUP	3 TPUR	3 SLIMK	3 IFI	3 TPSEC	1 KOF	3 TPRED	2	I	beac code status code trk	TRACK	0
22		ACTYPT	CTS	18	TPRED	0 TPSEC	3 TPUR	3 KOF	3 IFI	1	0 SCIME	2 TINIT	3 SLIMK	0 TEDC	2	I	aircraft type code trk	TRACK	0
23		ACTYPT2	CTS	18	IFI	3	0 KOF	3	0	0	0	0	0	0	0	C	ap acen site ad alphr	TRACK	0
24		ALT1	CTS	17	TINIT	3 AUT	2 TPUR	1 ALTRKR	0 CDR	2 COMA	3 COMB	2 KOF8	0 KOFC	0 MSAW	0	L	rep altitude trk	TRACK	0
25		ALT1	CTS	17	TI	0 TRAD	2 KOF8	3 KOFC	3	0	0	0	0	0	0	I	rep altitude trk	TRACK	0
26		ALT2	CTS	17	TINIT	3 AUT	0 TPUR	1 IFI	0	0	0	0	0	0	0	L	trak console printout requested	TRACK	0
27		ALT31	CTS	17		0 AUT	0 TPUR	1	0	0	0	0	0	0	0	L	alt missing last scan trk	TRACK	0
28		ALT32	CTS	17		0 AUT	0 TPUR	1	0	0	0	0	0	0	0	L	alt valid current scan trk	TRACK	0
29		ALT4	CTS	17	TINIT	3 AUT	0 TPUR	1	0	0	0	0	0	0	0	L	assigd beac code checked trk	TRACK	0
30		ALT51	CTS	17	TINIT	3 AUT	0 TPUR	1	0	0	0	0	0	0	0	L	current scan alt missing trk	TRACK	0
31		ALT52	CTS	17	TINIT	3 AUT	0 TPUR	1	0	0	0	0	0	0	0	I	last scan alt invalid trk	TRACK	0
32		ALT6	CTS	17	TINIT	3 AUT	0 TPUR	1	0	0	0	0	0	0	0	I	trak warn count trk	TRACK	0
33		ALT7	CTS	17		0 AUT	0 TPUR	0	0	0	0	0	0	0	0	L	terrain warn is in effect trk	TRACK	0
34		ALT8	CTS	17	TINIT	3 AUT	0 TPUR	0	0	0	0	0	0	0	0	L	approct warn is in effect trk	TRACK	0
35		ALT9	CTS	17	TINIT	0 AUT	0 TPUR	0 IFRLD	2	0	0	0	0	0	0	L	msaw is inhibited trk	TRACK	0
36		ASOCT1	CTS	6	SLIMK	3 TPSEC	3 TINIT	3 TPUR	3 TPRED	2 CATRK	0 CDR	2 COMA	3 COMB	2 UNIT	0	E	track numbr trk	TRACK	0
37		ASOCT1	CTS	6	TI	0 TRAD	2 TSUBO	0 TSUBI	0	0	0	0	0	0	0	E	track numbr trk	TRACK	0
38		ASOCT1	CTS	6	IFI	3 KOF	3	2 MSAW	0 MTGCT	0 PDOP	2 RTQLC	0	0 SWABS	0 TEDCRS	0	E	track numbr trk	TRACK	0

40	ASOC12	CTS	6 IPUR	2 IPSEC	3 TINIT	2 IPUR	2 IFI	2 IFI	1	0	0	L	0 1	is dev track trk	TRACK
43	ASOC13	CTS	6 IEDC	3 IPSEC	3 TINIT	3 IPUR	3 IFI	1	0	0	0	L	0 1	sat indicator is enabled trk	TRACK
41	ASOC14	CTS	6 IEDC	3 IPSEC	3 TINIT	3 IPUR	3 IFI	1	0	0	0	L	0 1	is in emergency status trk	TRACK
42	ASOC15	CTS	6 ICRSS	2 IPSEC	3 TINIT	3 IPUR	3 IPRED	2 IFI	1 SLENR	1 IEDC	3 BOF	3	0 3	fineness value trk	TRACK
43	ASOC16	CTS	6 IEDC	2 IPSEC	1 TINIT	3 IPUR	0 IFI5	2 IFI	3 BOF	3	0	L	0 1	Pulloff has been completed	TRACK
44	ASOC17	CTS	6 IEDC	2 IPSEC	3	0 IPUR	3	0	0	0	0	L	0 1	trk class code trk	TRACK
45	ASOC18	CTS	6 IEDC	2 IPSEC	3 TINIT	2 IPUR	3 IPRED	1	0	0	0	L	0 1	turn correl proc inhibited trk	TRACK
46	ASOC19	CTS	6 ICRSS	2 IPSEC	3 TINIT	2 IPUR	3 IPRED	3 IEDC	2	0	0	L	0 1	has been predicted trk	TRACK
47	CATB	CTS	19 RETRACK	3	0	0	0	0	0	0	0	L	0 1	pos ssmb char trk	TRACK
48	CATB	CTS	19 BOF	2 PDOP	2 SLENR	0 IPRED	2 IFI	0 TRAD	2 ISUBD	0 ISUBI	2 IFIST	3 IFSET	0 5	pos ssmt char trk	TRACK
49	CATB	CTS	19 IROUT	0 AUT	2 IPUR	0 IEDC	2 CDR	2 COMA	3 COMB	3 IF	3 BOF	3	0 5	pos ssmt char trak	TRACK
50	CATBJ	CTS	21 IROUT	0 COMA	2 COMB	3 IFI	0 TRAD	2 CORD	0	0	0	L	0 5	pos data 5 word	TRACK
51	CATC11	CTS	19	0 MSAW	0 IFI	0 TRAD	2 IPSEC	2 IEDC	2 IPUR	2 TINIT	3		0 5	rep beco code trk	TRACK
52	CATC31	CTS	19	0 IPRED	2 CATU	0 CDR	2 COMA	3	0 CRIT	0 IFI	3 BOF	2 IEDC	2 5	rep beco code trk	TRACK
53	CATC12	CTS	19 TUD	2 IPRED	2 CATU	0 CDR	2 COMA	3	0 CRIT	0 IFI	3 BOF		0 5	acid char trk	TRACK
54	CATC22	CTS	19 MAT	0 IPSEC	3 IT	0 TRAD	3 IEDC	2 SLENR	2 IPUR	3 TINIT	2 RETRACK	3	0 5	acid char trk	TRACK
55	CATC21	CTS	19 MAT	0 MSAW	0 IT	0 IPUR	2 TINIT	3 SLENR	0	0	0	0	0	idb id char trk	NA
56	CATC21	CTS	19 TUD	2 IPRED	2 IPSEC	2 CDR	2 COMA	3 IEDC	2 CRIT	0 SYS	3 BOF	3	0	idb id char trk	NA
57	CATC22	CTS	19 TUD	2 IPRED	3 IPSEC	2 SLENR	0 IEDC	2 IPUR	3 TINIT	3 IFI	2 RETRACK	2 BOF	3		NA
58	CATC31	CTS	19 COMA	1 BOFC	2 TINIT	3	0	0	0	0	0	0	0 5	alt chars trk	TRACK
59	CATC32	CTS	19 COMA	1 BOF	1 TINIT	0 IFI	1	0	0	0	0	0	0 1	rec pos symbol trk	TRACK
60	CATC43	CTS	20 COMA	3	0	0	0	0	0	0	0	2	0 5	IAS pad char	TRACK
61	CATC42	CTS	20 COMA	3	0	0	0	0	0	0	0	L	0 5	alts typ trk	TRACK
62	CFLGT1	CTS	8 TUDS	3 RETRACK	3	0	0	0	0	0	0	L	0 1	asst sensor numbr trk	TRACK
63	CFLGT1	CTS	8 CDR	2 COMA	3 COMB	2	0 CRIT	0	0 BOF	3	0	0	0 1	asst sensor numbr trk	TRACK
64	CFLGT1	CTS	8 MSAW	0 MFP	0 SMOTH	0 SWABS	0	3 FADERS	0 FI	0 TRAD	2 FSUBD	0 FSUBI	0 1	asst sensor numbr trk	TRACK
65	CFLGT1	CTS	8	0 IPSEC	0	0 TUD	3 IROUT	2 IPUR	3 IPRED	0 AUT	2 BNATS	0 CATU	0 1	asst sensor numbr trk old	TRACK
66	CFLGT10	CTS	8 IFI	1 IPSEC	3 TINIT	3 BOF	1	0 IPUP	3 IPRED	3 AUT	0	0	0 1	corr coast count trk	TRACK
67	CFLGT11	CTS	8 SLENR	0 IPSEC	3 TINIT	3 IPUR	2 IDOP	3 BOF	2 IPRED	2 AUT	2 IFI	3 MAT	2 1	acrcy depart status code trk	TRACK
68	CFLGT12	CTS	8 IEDC	3 IPSEC	1 TINIT	3 IFI	1 BOF	1	0 IPUP	3 AUT	0	0	0 1	course cde match count	TRACK
69	CFLGT13	CTS	8 IFI	1 IPSEC	3 TINIT	3 BOF	1	0	0	0 AUT	0	0	0 1	[illegible] second pass flag	TRACK
70	CFLGT14	CTS	8 SLENR	0 IPSEC	3 TINIT	3 IDOP	3 BOF	3 IPUR	2 IPRED	2 AUT	0 IFI	3 MAT	1	flight plan was received	TRACK
71	CFLGT15	CTS	8 BOF	1 IPSEC	1 TINIT	3	0	0	0	0 AUT	0 IFI	2	0	data acquired is deactivated	TRACK
72	CFLGT16	CTS	8 SLENR	0 IPSEC	3 TINIT	3 IDUP	3 BOF	3 IFI	3 IPRED	3 AUT	2	0	0 1	t outside max radar range	TRACK
73	CFLGT2	CTS	8 RETRACK	2 IPSEC	0	2 TUD	3	0 IPUR	2	0 AUT	2	0	0 1	cts thred disp0s code	TRACK
74	CFLGT3	CTS	8 SLENR	0 IPSEC	3 TINIT	3 TUD	2 IFI	3 IDOP	3 IPRED	2 AUT	0 MAT	2 BOF	3 1	Auto space acid char count	TRACK
75	CFLGT4	CTS	8 SLENR	0 IDOP	3 TINIT	2 MAT	2 BOF	0 IFI	3 IPRED	2 AUT	2 IPSEC	2	0 1	fp data disp0s code	TRACK
76	CFLGT5	CTS	8 SLENR	0 IPSEC	3 TINIT	3 IFI	3 IDOP	3 IPUR	3 IPRED	2 AUT	2 MAT	2 BOF	3 1	Auto acq is inhibited	TRACK
77	CFLGT6	CTS	8 SLENR	0 IPSEC	3 TINIT	3 COMC	2 BOF	3	0 IPRED	2 AUT	2 IFI	3	0 1	[illegible] d heave jet	TRACK
78	CFLGT7	CTS	8 ICRSS	2 IPSEC	3 TINIT	3	0	0 IPUR	1	0 AUT	2	0	0 1	[illegible] status	TRACK

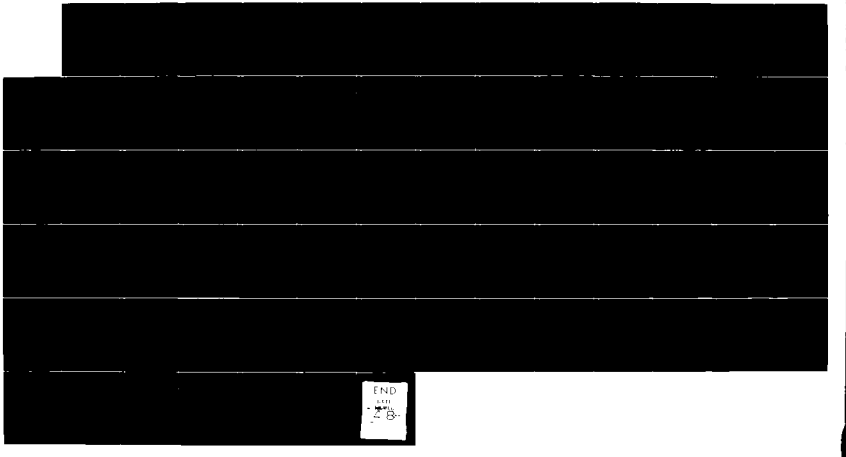
79	CFLGT8	CTS	8 SLIMR	0 IPSEC	3 TIMIT	3 IFI	3 DOP	3	0 IPRED	0 AMT	2	0	0 I	code display is inhibited	TRALR	0
80	CFLGT9	CTS	8 TCRSS	2 IPSEC	3 TIMIT	3 IDUP	3 DOP	3 IPUR	3 IPRED	2 AMT	2 IFI	3	0 S	radar flt plan is available	TRALR	0
81	CTSIT	CTS	1 TEXEC	3 IPUR	3 TCRSS	3 IPSEC	3 IUD	3 FUDS	3 TEDC	3 TIMIT	3 MAT	3 SLIMR	3 A	cts trk	TRACR	0
82	CTSST1	CTS	14	0	0 RIDUP	0 SCIME	0 SWARS	0	2 TI	0 TRAD	2 TSUBU	0 TSUBI	0 S	trk scratch pad	TRALR	0
83	CTSST1	CTS	14 TIMIT	3 AUT	2 IPUR	1 COMA	3	0 CRIT	0 IFI	3 IFO	1 DOP	3	0 S	trk scratch pad	TRALR	0
84	CTSST2	CTS	14 TROUT	0 AUT	3 IPUR	3 IFI	3 SLIMR	0 TIMIT	3 IPSEC	3 TEDC	3 IDUP	3 MAT	3 I	reset temp store	TRACR	0
85	CTSST3	CTS	14 IFI	3 AUT	0 IPUR	1 TIMIT	3 DOP	3	0	0	0	0	0 L	leader direct reset inhibited	TRALR	0
86	CTSST4	CTS	14 IFI	1 AUT	3 IPUR	1 TIMIT	3 DOP	1	0	0	0	0	0 L	is eligible for flash rtn	TRALR	0
87	CTSST5	CTS	14 TCRSS	0 AUT	3 IPUR	1 TIMIT	3	0	0	0	0	0	0 L	is displaying blinking rdr	TRACR	0
88	CTSST6	CTS	14	0 AUT	3 IPUR	1	3 TIMIT	3	0	0	0	0	0 L	in handoff action stat	TRALR	0
89	CTSST7	CTS	14 COMA	2 AUT	3 IPUR	1 IFI	3 TIMIT	3 DOP	1	0	0	0	0 L	prev auto acquired	TRALR	0
90	CTSST8	CTS	14	0 AUT	3 IPUR	1 TIMIT	3	0	0	0	0	0	0 L	has assigned altitude	TRALR	0
91	CTSI1	CTS	1 CATRK	0 CATU	0 COR	2 COMA	0	0	0 CRIT	0 DBATM	0 IFI	3 IFO	3 I	controling posit numbr assoc trk	TRALR	0
92	CTSI1	CTS	1 TSUBI	0 RETRACK	0	0	0	0	0	0	0	0	0 I	controling posit numbr assoc trk	TRACR	0
93	CTSI1	CTS	1 DOF	3	0	0 MAT	2 MSAM	0 MIGA	0 MTGCT	0 PAUS	2 PEMP	2 QLOOK	0 I	controling posit numbr assoc trk	TRALR	0
94	CTSI1	CTS	1 RIDUP	0 RTOCC	0 SCIME	2 SLIMR	3 SWARS	0 TD-P	3 TEDORS	0 TI	0 TRAD	2 TSUBU	0 I	controling posit numbr assoc trk	TRACR	0
95	CTSI1	CTS	1 TEDC	2 IPSEC	3 TIMIT	3	0	0 IPUR	3 IPRED	2 AMT	2 ALTRER	0 BMATS	0 I	controling posit numbr assoc trk	TRALR	0
96	CTSI2	CTS	1 TEDC	2 IPSEC	1 TIMIT	3 DOF	3 ERRUP	3 IPUR	1 IPRED	2 AMT	2 IFI	3 SLIMR	1 I	handoff status code assoc trk	TRALR	0
97	CTSI3	CTS	1 TEDC	2 IPSEC	3 TIMIT	3 FUDS	2 IRUPE	2 IPUR	3 IPRED	2 TCRSS	2 AUT	2 SLIMR	3 I	at file status code	TRACR	0
98	CTSI3	CTS	1 IFI	3 IDUP	2 COMC	2 MAT	3 DOF	3 IUD	3	0	0	0	0 I	at file status code	TRACR	0
99	CTSI4	CTS	1 SLIMR	3 IPSEC	3 TIMIT	3 RETRACK	2 TROUT	2 IPUR	3 IPRED	3 AUT	2 IFI	3 MAT	3 I	at a word code	TRACR	0
100	CTSI4	CTS	1 IDUP	3 COMC	2 DOF	3	0	0	0	0	0	0	0 I	at a word code	TRACR	0
101	CTSI5	CTS	1 TEDC	3 IPSEC	3 TIMIT	3 RETRACK	2 TROUT	2 IPUR	3 IPRED	3 AUT	2 IFI	3 SLIMR	3 I	at tp word code	TRALR	0
102	CTSI5	CTS	1 IDUP	2 COMC	2 MAT	3 DOF	3	0	0	0	2	0	0 I	at tp word code	TRACR	0
103	CTSI6	CTS	1 SLIMR	3 IPSEC	3 TIMIT	3 IUD	2 FUDS	2 IPUR	3 IPRED	2 AMT	2 IFI	3 DOF	3 I	at [illegible]	TRACR	0
104	CTSI7	CTS	1 SLIMR	3 IPSEC	3 TIMIT	3 DOF	3	0 IRUPE	3 IPRED	3 AMT	2 IFI	3	0 R	at [illegible]	ACR	0
105	CTSI8	CTS	1 SLIMR	3 IPSEC	3 TIMIT	3 DOF	3	0 IRUPE	3 IPRED	2 AMT	2 IFI	3	0 I	at [illegible]	TRACR	0
106	CTSI9	CTS	1 TEDC	3 IPSEC	0 TIMIT	0 DOF	0 SLIMR	0 IPUR	0 IPRED	3 AMT	3	3	3 I	at [illegible]	TRACR	0
107	DAIT1	CTS	14 TPUR	1 ALTRER	0 COR	2 COMA	0	0 MSAM	0 TI	0	3	3	0 R	site coordinate trk	TRALR	0
108	DAIT2	CTS	14 TPUR	1 ALTRER	0 COR	2 COMA	0	0 MSAM	0 TI	2	3	3	0 R	site coordinate trk	TRALR	0
109	FDIT1	CTS	14 TPUR	2 COMA	3 DOF	3	0 IFI	3 TREQ	0 TMAT	2 [illegible]	3 [illegible]	3	3 A	at display a [illegible]	TRACR	0
110	FDIT2	CTS	14 TPUR	3 COMA	3 DOF	3	0 IFI	3 TREQ	0 TMAT	2 [illegible]	3 [illegible]	3	3 A	at display a [illegible]	TRACR	0
111	[illegible]	CTS	12	0 CRIT	0 IFI	1 TEDC	1 DOF	3	0	[illegible]	[illegible]	3	3 I	[illegible]	TRALR	0
112	IGCT1	CTS	12 TSUBI	0	2 RIDUP	0	3	0 SMARS	0 TEDC	[illegible]	0	0 I	0	[illegible]	TRALR	0
113	IGCT2	CTS	12	0	0 TIMIT	3	3	0	3 IPUR	0 AMT	0 MA	3	0	[illegible]	TRALR	0
114	IGCT10	CTS	12	0 RIDUP	0	3	0 SWARS	0	0 TEDC	[illegible]	[illegible]	[illegible]	0	[illegible]	TRALR	0
115	IGCT19	CTS	12 COMA	2 CRIT	0	0 IFO	1 DOF	3	0	0	0 MA	0 FAIL	2 L	[illegible]	TRACR	0
116	IGCT10	CTS	12	0	0 TIMIT	3	0	0	3 IPUR	1 FAIL	0 MA	0	0 I	[illegible]	TRALR	0
117	IGCT11	CTS	12	2 RIDUP	0	3 SLIMR	3 SWARS	0 IDUP	3 IPRED	0	2 [illegible]	0 IWRS	0 I	[illegible]	TRALR	0
118	IGCT13	CTS	12	0 IPSEC	3 TIMIT	3	0	0	3 IPUR	AT	0 MA	0	0 I	[illegible]	TRALR	0



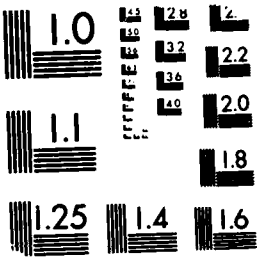
159	LGCT6	CTS	12 ILOC	3 IPSEC	1 TINIT	3	0 IPROM	.	1 IPUR	1 CATM	0 COMA	1	0 1	Tech corrected or inhibited	IRAM	0	
160	LGCT6	CTS	12 PDUP	0 RIDUP	0	3	0 SWAP	0	3 IPUR	0	3 IOBJ	0 IOBJ	0 1	Tech corrected or inhibited	IRAM	0	
161	LGCT6	CTS	12	0 CRIT	0	0 IPU	1 RMP	3	0	0	0 MTGT	0	3 1	Tech corrected or inhibited	IRAM	0	
162	LGCT7	CTS	12	0	0 TINIT	3	0	0	3 IPUR	1 CATU	0 COMA	1	0 1	correlated by tech	IRAM	0	
163	LGCT7	CTS	12 IPRED	1 CRIT	0	0 IPU	1 RMP	3	0	0	0 MTGT	0	3 1	correlated by tech	IRAM	0	
164	LGCT7	CTS	12 PDUP	0 RIDUP	0	3	0 SWAP	0	3 IPUR	0	3 IOBJ	0 IOBJ	0 1	correlated by tech	IRAM	0	
165	LGCT8	CTS	12	2 RIDUP	0	3	0 SWAP	0	3 IPUR	0	3 IOBJ	0 IOBJ	0 1	word has changed	IRAM	0	
166	LGCT8	CTS	12	0	0 TINIT	3	0	0	3 IPUR	1 CATM	0 COMA	1	0 1	word has changed	IRAM	0	
167	LGCT8	CTS	12	0 CRIT	0 IPU	1 RMP	1 RMP	3	0	0	0 MTGT	0 PAUS	3 1	word has changed	IRAM	0	
168	LGCT9	CTS	12	2 RIDUP	0	3	0 SWAP	0	3 IPUR	0	3 IOBJ	0 IOBJ	0 1	processed by front	IRAM	0	
169	LGCT9	CTS	12	0 CRIT	0	0 IPU	1 RMP	3	0	0	0 MTGT	0 PAU	0 1	processed by front	IRAM	0	
170	LGCT9	CTS	12	0	0 TINIT	3 IROUT	3	0	3 IPUR	1 CATU	0 COMA	1	0 1	processed by front	IRAM	0	
171	LMEIT1	CTS	16 IPUR	2 ALTRER	0 TINIT	3 IPI	2 RIWP	0 SEEI	0 SIINT	3 RMP	2	0	0 1	[illegible] tech counter	IRAM	2	
172	LMEIT2	CTS	16 IROUT	3 ALTRER	0 ALTRER1	0 IPI	1 IPUR	1 SIEI	0 SIINT	3 RMP	2 [illegible]	1 TINIT	3 1	[illegible] tech counter	IRAM	2	
173	LMEIT3	CTS	16 IPSEC	2 ALTRER	0 ALTRER1	0 IPI	3 MTGT	0 SOBI	0 SIINT	3 RMP	2 TINIT	3 IPUR	3 1	[illegible] tech counter	IRAM	2	
174	LMEIT4	CTS	16 IROUT	2 ALTRER	0 ALTRER1	0 IPI	3 IPUR	3 SOBI	0 SIINT	3 RMP	3 [illegible]	2 TINIT	3 1	[illegible]	IRAM	2	
175	LMEIT5	CTS	16 IPUR	2 ALTRER	0 ALTRER1	0 IPI	2 RIWP	0 SEEI	0 SIINT	3 RMP	.	.	0 1	[illegible] tech counter	IRAM	2	
176	LMEIT6	CTS	16 IROUT	3 ALTRER	0 IPUR	1 IPI	2 RIWP	0 SOBI	0 SIINT	3 RMP	. TINIT	1	0 1	[illegible] tech counter	IRAM	2	
177	LMEIT7	CTS	16 IPSEC	3 ALTRER	0 ALTRER1	0 IPI	3 IPUR	2 SOBI	0 SIINT	3 RMP	3 TINIT	3 IPUR	3 1	[illegible] tech counter	IRAM	2	
178	LMEIT8	CTS	16 IROUT	2 ALTRER	0 IPUR	3 IPI	3 MTGT	0 SOBI	0 SIINT	3 RMP	3 TINIT	3 IPUR	3 1	[illegible] tech counter	IRAM	2	
179	LME2I1	CTS	16 IPUR	1 ALTRER	0 ALTRER1	0 IPI	2 SEEI	0 SIINT	3 RMP	3	3	0	3 1	[illegible]	IRAM	2	
180	LME2I2	CTS	16 IROUT	3 ALTRER	1 IPI	2 SEEI	0 SIINT	3 RMP	3 IPUR	3	3			[illegible]	IRAM	2	
181	LME2I3	CTS	16 IPUR	3 ALTRER	0 ALTRER1	0 IPI	3 SOBI	2 SIINT	2 RMP	3 IPUR	3			[illegible]	IRAM	2	
182	LME2I4	CTS	16 IROUT	2 ALTRER	0 ALTRER1	0 IPI	3 IPUR	0 SIINT	3 RMP	3 IPUR	3			[illegible]	IRAM	2	
183	LME3I5	CTS	16 IPUR	3 ALTRER	0 ALTRER1	0 IPI	3 IPUR	0 SIINT	3 RMP	3	3			[illegible]	IRAM	2	
184	LME3I6	CTS	16 IPUR	3 ALTRER	0 ALTRER1	0 IPI	3 IPUR	0 SIINT	3 RMP	3 IPUR	3			[illegible]	IRAM	2	
185	LME2I7	CTS	16 IPUR	3 ALTRER	0 ALTRER1	0 IPI	3 IPUR	0 SIINT	3 RMP	3	3			[illegible]	IRAM	2	
186	LME2I8	CTS	16 IPUR	2 ALTRER	0 ALTRER1	0 IPI	3 IPUR	0 SIINT	3 RMP	3	3			[illegible]	IRAM	2	
187	LME3I	CTS	16 TINIT	3 IPUR	1 COMA	3	0 IPUR	0 SIINT	3 RMP	3	3			[illegible]	IRAM	2	
188	LME3I2	CTS	16 TINIT	3 IPUR	1 COMA	3	0 IPUR	0 SIINT	3 RMP	3	3			[illegible]	IRAM	2	
189	LME3I3	CTS	16 TINIT	3	0 COMA	3	0 IPUR	0 SIINT	3 RMP	3	3			[illegible]	IRAM	2	
190	LME3I4	CTS	16 TINIT	3	0 COMA	3	0 IPUR	0 SIINT	3 RMP	3	3			[illegible]	IRAM	2	
191	LME3I5	CTS	16 TINIT	3 MAT	1 COMA	0	0 IPUR	0 SIINT	3 RMP	3					IRAM	2	
192	LME3I6	CTS	16 TINIT	1 MAT	1 COMA	3	0 IPUR	0 SIINT	3 RMP	3	3 IPUR	3 IPUR	3	[illegible]	IRAM	2	
193	PALT1	CTS	18 IPUR	1 ALTRER	0 ALTRER1	0 CATMT	0 IOBJ	3 COMA	3 RMAW	3			3	[illegible]	IRAM	2	
194	PALT2	CTS	18 IPUR	3 ALTRER	0 ALTRER1	0 CATMT	0 IOBJ	3 COMA	3 RMAW	3				[illegible]	IRAM	2	
195	PALT3	CTS	18 IPUR	1 ALTRER	0 ALTRER1	0 CATMT	0 IOBJ	3 COMA	3 RMAW	3			3	[illegible]	IRAM	2	
196	PALT4	CTS	16 IPUR	3 ALTRER	0 ALTRER1	0 CATMT	0 IOBJ	3 COMA	3 RMAW	3				[illegible]	IRAM	2	
197	POBIT1	CTS	21	0 COMA	3	0 IPUR	3 IPAD	3 TINIT	3 IPUR	3				[illegible]	IRAM	2	
198	POBIT2	CTS	21	0 COMA	3	0 IPUR	3 IPAD	2 TINIT	3 IPUR	3				[illegible]	IRAM	2	

AD-A189 862 NEW YORK TRACON DEMONSTRATION OF PROGRAM RECODING REQUIREMENTS ANALYSIS DOCUMENT(U) DATA TRANSFORMATION CORP SILVER SPRING MD AUG 87 DOT/FAA/CT-87/34 3/3

UNCLASSIFIED DTFA03-85-C-00058 F/G 12/5 NL



END



279	TAB312	CTS	20	0	0	0	0	0	0	0	0	0	0		NA
280	TAB313	CTS	21	0	0	0	0	0	0	0	0	0	0		NA
281	TAB472	CTS	21	0	0	0	0	0	0	0	0	0	0		NA
282	THRET1	CTS	14 TIMIT	3 AUI	2 BRAIS	0 COMA	3 CRIT	0 IFO	2 ROF	3	0	0 TUD	3 I	trk_thrd prev_trk_numbr	TRACE
283	THRET1	CTS	14 IFI	1 RETRACK	1	0	0	0	0	0	0	0	0 I	trk_thrd prev_trk_numbr	TRACE
284	THRET2	CTS	14 TEDC	2 TPSEC	2 TUD	3 IFI	3 SLIME	2 IDOP	0 ROF	3 TIMIT	3 TPUR	2 TUD	0 I	trk_thrd_next track_numbr	TRACE
285	THRET1	CTS	5 TPSEC	3 TIMIT	3 TPUR	2 COR	2 TEDC	3 ROF	2 PASS	3 IPRED	3 IFI	1 TRAD	3 E	L_last_successful_correl_time	TRACE
286	TIMET2	CTS	5 TPSEC	3 TIMIT	3 TPUR	1 TSUBO	0 TSUBI	0 IFI	0	0	0	0	0 I	last_successful_correl_sta	TRACE
287	TIMET3	CTS	5 TPSEC	3 TIMIT	3 TPUR	1 IFI	1	0	0	0	0	0	0 L	L_sucsfl_corr_stn_not_present	TRACE
288	TMPT1	CTS	15 TEDC	2 TCRSS	2	0	0 TIMIS	3	0 TPUR	3	0 BRAIS	0	2 I	s_thrd_prev_trak_numbr	TRACE
289	TMPT2	CTS	15 TEDC	2 TCRSS	2 IPRED	2 TUDS	3 TPSEC	2 TIMIT	3	0	0 COFC	3 MSAN	0 I	s_thrd_next_trak_numbr	TRACE
290	TMPT3	CTS	15 TEDC	2 TIMIT	2 TPSEC	2 TPUR	2 TUDS	3	0	0	0 II	0 TSUBO	0 I	secto number	TRACE
291	TMPT4	CTS	15 TROUT	2 TEDC	2 TCRSS	2 IPRED	2 TUDS	3 TPSEC	2 TIMIT	2	0 TSUBI	0	0 L	sec thred_has_no_next_trk	TRACE
292	TNT1	CTS	11 TCRSS	3 TPSEC	2 RETRACK	1	0	0 TEDC	3 BRAIS	0 COMA	3 COMB	0 CRIT	0 I	tnt_rat_index	TRACE
293	TNT10	CTS	11 TCRSS	3 IPRED	3 TPUR	3 TPSEC	3	0	0	2 IFO	0 ROF	3	0 L	had_scan correl processing	TRACE
294	TNT2	CTS	11 SLIME	2 TPSEC	3 TIMIT	2 TPUR	2 IFI	2 IPRED	3 ROF	3	0 SWABS	0 TEDCRS	0 L	actively_tracking	TRACE
295	TNT3	CTS	11 TCRSS	3 TPUR	1	0	0	0 II	0 IPRED	0 TRAD	2 TSUBO	0 L	had_report_in_secondary bin	TRACE	
296	TNT4	CTS	11 SLIME	3 TPSEC	3 TIMIT	3 TPUR	3 ROF	3	0 TSUBI	0	0 IFI	3	0 L	da rs to_be_displayed	TRACE
297	TNT5	CTS	11 TPUR	1 TIMIT	3 ROF	1	0	0	0 IFI	1	0	0	0 I	fp_status_code	TRACE
298	TNT6	CTS	11 TROUT	3 SLIME	3 IPRED	3 TUDS	3 TPSEC	3 TIMIT	3 IFI	3 TPUR	3 ROF	3 TUD	3 I	change to_sector thred_code	TRACE
299	TNT7	CTS	11 TROUT	2 SLIME	0 TEDC	3 TIMIT	3 TPUR	3 TPSEC	3 TCRSS	2 IPRED	3 IFI	3 ROF	3 L	correl_this_scan	TRACE
300	TNT8	CTS	11 TEDC	3 TIMIT	3 TPSEC	3 TPUR	3 IFI	L ROF	L	0	0	0	0 I	pur correl_is inhibited	TRACE
301	TNT9	CTS	11 TCRSS	3 TPSEC	2 TPUR	1	0	0	0	0	0	0	0 I	rts_to bin_count	TRACE
302	XCORT	CTS	5 TPSEC	3 TIMIT	3 TROUT	2 IPRED	3 TPUR	3 ROF	3 COMA	3 IFI	3 TEDC	3 SLIME	3 R	pred_x_coord	TRACE
303	XYDOT1	CTS	5 TPSEC	3 IPRED	2 TPUR	3 CATRK	0 COR	2 ROF	3 TEDC	3 CRIT	0 IFI	0 TIMIT	3 R	x_dot_trk	TRACE
304	XYDOT2	CTS	5 TPSEC	3 TPRED	2 TPUR	3 CATRK	0 COR	2 ROF	3 IFI	3 TIMIT	3 TEDC	3	0 R	y_dot trk	TRACE
305	XYDOT3	CTS	5 TPSEC	2 TEDC	2 TPUR	2 CATRK	0 COR	2 ROF	3 TIMIT	2 IFI	3	0	0 I	apt_tabl_exit_fix	TRACE
306	XYDOT4	CTS	5 TPSEC	2	0 TPUR	2 CATRK	0 COR	2 ROF	3 TIMIT	2 TEDC	2 IFI	3	0 I	apt_entr_tab_fix	TRACE
307	XYDOT4I	CTS	5 IFI	3 ROF	3	0	0	0	0	0	0	0	0 S	alt_primary_controller	TRACE
308	XYDOT5	CTS	5 TPSEC	2 TPRED	1 IFI	3 CATRK	0 COR	2 ROF	3 TIMIT	1	0	0	0 E	alo_tab_coast time	TRACE
309	YCORT	CTS	5 TPSEC	3 TIMIT	3 TROUT	2 TPRED	3 TPUR	3 TRAD	2 TEDC	3 SLIME	3 MISCI	0 MSAN	0 R	predicted y coord	TRACE
310	YCORT	CTS	5 IFI	3 ROF	3	0	0	0	0	0	0	0	0 R	predicted y coord	TRACE
311	ECIDT	IDAT	5	0 IFI	3 ROF	3 TPUR	3 TPSEC	3	0	0	0	0	0 A	ecid_tab	TRACE
312	TCIDT	IDAT	5	0 IFI	3 ROF	3 TPUR	3 TPSEC	3	0	0	0	0	0 A	tcid_tab	TRACE
313	RTCQ	NASM0643	18 PSRAP	2 MAT	2 TIMIT	2	0	0	0	0	0	0	0	rtc_value	NA
314	SECTOLQ	NASM0643	31 PSRAP	2	0	0	0	0	0	0	0	0	0 R	p_sectr_ork_Q_max_dlta_wait	NA
315	SIMSMTQ	NASM0643	16 PSRAP	2	0	0	0	0	0	0	0	0	0 I	consectv_sectr_ok_max	NA
316	SIPBLQ	NASM0643	41 PSRAP	2	0	0	0	0	0	0	0	0	0 I	s_in_buffer_lngth	NA
317	SIPCSMQ	NASM0643	31 PSRAP	2	0	0	0	0	0	0	0	0	0 I	min_sectr_orks_for psrap_synch	NA
318	SIPBERQ	NASM0643	31 PSRAP	3	0	0	0	0	0	0	0	0	0	illegal_id max	NA

319	SIPIPRSQ	NASMD643	31	PSRAP	2	0	0	0	0	0	0	0	0	0	I	synch_insectiv_id	NA	0
320	SIPLWIQ	NASMD643	31	PSRAP	2	0	0	0	0	0	0	0	0	0		ps_execs_wout_psrap_inp_fail	NA	0
321	SIPPTLQ	NASMD643	41	PSRAP	2	0	0	0	0	0	0	0	0	0	I	s_scan_t_stor_tbl_legth	PSRAP	0
322	SIPROIQ	NASMD643	41	PSRAP	2	0	0	0	0	0	0	0	0	0	S	output_time_rpt_stor_ovflow_msg	NA	0
323	SIPIFQ	NASMD643	30	PSRAP	3	0	0	0	0	0	0	0	0	0		fail_time_delay	NA	0
324	SIPTIMEQ	NASMD643	30	PSRAP	2	0	0	0	0	0	0	0	0	0	R	ps_startup_time	PSRAP	0
325	NSECIT	NSEC	6	TEXEC	1	TEOC	2	TCRSS	2	TPSEC	2	TINIT	2	TROUT	2	TPUR	2	TPRED	2	0	0	A	nsec_trk	TRACK	0
326	NSECITI	NSEC	6	TEXEC	1	TEOC	2	TCRSS	2	TPSEC	2		0	TROUT	2	TPUR	2	TPRED	2	0	0	I	nsec_sec_number	TRACK	0
327	NSECIT2	NSEC	6	TEXEC	1	TEOC	2	TCRSS	2	TPSEC	2	TINIT	0	TROUT	2	TPUR	2	TPRED	2	0	0	L	nsec_s_proc_is_required	TRACK	0
328	BOHTIQ	PARAM	0	TPUR	2	MSITEQ	0		0		0		0		0		0		0	0	0	I	i_file_min_hits_beacon_only	SYSTEM	0
329	BOMSIQ	PARAM	0	TPUR	2	MSITEQ	0		0		0		0		0		0		0	0	0	I	max_misses_init_file	SYSTEM	0
330	BOMLIQ	PARAM	0	TPUR	2	MSITEQ	0		0		0		0		0		0		0	0	0	I	beacon_only_window_length	SYSTEM	0
331	DISQ	PARAM	0	TPUR	2	TI	0	TINIT	2		0		0		0		0		0	0	0	R	allow_dist_betw_targ_trk	SYSTEM	0
332	DXYBOTQ	PARAM	0	TPUR	2	MSITEQ	0		0		0		0		0		0		0	0	0	R	i_fil_max_velocity_rdr_only	SYSTEM	0
333	FIRM2Q	PARAM	0	TPUR	2	TI	0		0		0		0		0		0		0	0	0	I	tpur_firmness	SYSTEM	0
334	LSPDIQ	PARAM	0	TPUR	2		0		0		0		0		0		0		0	0	0	R	auto_i_min_speed	SYSTEM	0
335	PURTOQ	PARAM	0	TPUR	2		0		0		0		0		0		0		0	0	0		tpur_max_execut_time	SYSTEM	0
336	RRHTIQ	PARAM	0	TPUR	2	SDBI	0		0		0		0		0		0		0	0	0	I	rdr_rein_init_file_min_hits	SYSTEM	0
337	RRMSIQ	PARAM	0	TPUR	2	SDBI	0		0		0		0		0		0		0	0	0	I	rdr_re_init_file_max_misses	SYSTEM	0
338	RRMLIQ	PARAM	0	TPUR	2	SDBI	0		0		0		0		0		0		0	0	0	I	rdr_r_window_length	SYSTEM	0
339	RSHTIQ	PARAM	0	TPUR	0	SDBI	0		0		0		0		0		0		0	0	0			NA	0
340	RSMSIQ	PARAM	0	TPUR	0		0		0		0		0		0		0		0	0	0			NA	0
341	ROTSPDIQ	PARAM	0	TPUR	0		0		0		0		0		0		0		0	0	0	R	rdr_o_min_speed	SYSTEM	0
342	RSMLIQ	PARAM	0	TPUR	0	SDBI	0		0		0		0		0		0		0	0	0	I	rdr_o_window_length	SYSTEM	0
343	SCANIQ	PARAM	0	TPUR	2	CDAT	0	MIGA	0	MTGCT	0	SDBI	0		0		0		0	0	0	R	scan_length	SYSTEM	0
344	TIMLIQ	PARAM	0	TPUR	2		0		0		0		0		0		0		0	0	0	R	min_time_init_file_correl	SYSTEM	0
345	TIMUIQ	PARAM	0	TPUR	2		0		0		0		0		0		0		0	0	0	R	max_time_init_file_correl	SYSTEM	0
346	TPRSECQ	PARAM	0	TPUR	2	TI	0		0		0		0		0		0		0	0	0	I	working_sector_t2	SYSTEM	0
347	USPDIQ	PARAM	0	TPUR	2		0		0		0		0		0		0		0	0	0	R	auto_int_max_speed	SYSTEM	0
348	SIPIDT	PSRAP	148	PSRAP	2		0		0		0		0		0		0		0	0	0	A	ps_msg_id_table	NA	0
349	RATATT	RAT	0	TCRSS	0	TPSEC	2		0		0		0		0		0		0	0	0	A	rpt_score_tab	NA	0
350	RATIT	RAT	3	TCRSS	3	TPSEC	2		0		0		0		0		0		0	0	0	A	rat_trk	TRACK	0
351	RATIT1	RAT	3	TCRSS	1	TPSEC	2		0		0		0		0		0		0	0	0	L	rat_r_in_secondary_bin	TRACK	0
352	RATIT2	RAT	3	TCRSS	1		0		0		0		0		0		0		0	0	0	I	rat_r_radar_only	TRACK	0
353	RATIT3	RAT	3	TCRSS	3	TPSEC	2		0		0		0		0		0		0	0	0	I	rat_track_numbr	TRACK	0
354	RATIT4	RAT	3	TCRSS	1		0		0		0		0		0		0		0	0	0	I	rat_r_beacon_only	TRACK	0
355	RATIT5	RAT	3	TCRSS	3	TPSEC	2		0		0		0		0		0		0	0	0	I	rat_r_trs_index	TRACK	0
356	RATIT6	RAT	3	TCRSS	3	TPSEC	2		0		0		0		0		0		0	0	0	I	rat_r_tk_n_ref_count	TRACK	0
357	RATIT7	RAT	3	TCRSS	0		0		0		0		0		0		0		0	0	0			NA	0
358	RATITB	RAT	3	TCRSS	3	TPSEC	2		0		0		0		0		0		0	0	0	I	rat_r_t_score	TRACK	0

359	ROTIT	ROT	5	0	0	0	0	0	0	0	0	0	0			NA
360	ROTIT1	ROT	5	0	0	0	0	0	0	0	0	0	0			NA
361	ROTIT2	ROT	5	0	0	0	0	0	0	0	0	0	0			NA
362	ROTIT3	ROT	5	0	0	0	0	0	0	0	0	0	0			NA
363	ROTIT4	ROT	5	0	0	0	0	0	0	0	0	0	0			NA
364	ROTIT5	ROT	5	0	0	0	0	0	0	0	0	0	0			NA
365	ROTIT6	ROT	5	0	0	0	0	0	0	0	0	0	0			NA
366	ROTIT7	ROT	5	0	0	0	0	0	0	0	0	0	0			NA
367	ROTIT8	ROT	5	0	0	0	0	0	0	0	0	0	0			NA
368	ROTIT9	ROT	5	0	0	0	0	0	0	0	0	0	0			NA
369	DCONT	S662	3 ANT	2 CONA	2 CONB	3 CONC	3 CRIT	0 DOP	0 EFT	0 IFO	0 KOF	2 RIPH	0 A	param_tabl_disp		DISP
370	XTRAYT	SD0	39 CONB	0 SLINE	2	0	0	0	0	0	0	0	0			NA
371	ADBOT	SD01	52 TPUR	0	0	0	0	0	0	0	0	0	0			NA
372	ADBRITE	SD01	52 TPRED	2	0	0	0	0	0	0	0	0	0			NA
373	ADFIRST	SD01	51 TUD	0	0	0	0	0	0	0	0	0	0			NA
374	ADMSECT	SD01	51 TEXEC	0 TEDC	0 TPSEC	0 TINIT	0 TROUT	0 TPUR	0 TPRED	2 BRATS	0 MSAW	0 TCRSS	0			NA
375	ADRAT	SD01	52 TPSEC	0 TCRSS	0	0	0	0	0	0	0	0	0			NA
376	ADROT	SD01	52	0	0	0	0	0	0	0	0	0	0			NA
377	ADRPT	SD01	52 RTOCC	0 SMOTH	0 TCRSS	2 TSUBO	0	0	0	0	0	0	0			NA
378	ADRPT	SD01	52 TEXEC	0 TEDC	0 TPSEC	0 TINIT	0 TPUR	0 PSRAP	0 BRATS	0 MTGA	0 MTGCT	0 KOFF	0			NA
379	ADSUMT	SD01	52 TEXEC	0 TEDC	0 TPUR	0 PSRAP	0 BRATS	0 MTGA	0 MTGCT	0 TCRSS	0 TSUBO	0 TINIT	0			NA
380	ADTINT	SD01	52 TINIT	0 TPUR	0 PSRAP	0 CATRE	0 MTGA	0 MTGCT	0 TSUBO	0 TSUB1	0 TPSEC	0 TEDC	2			NA
381	ADTSATLL	SD01	22 CONA	3 TINIT	0	0	0	0	0	0	0	0	0			NA
382	ADTTST	SD01	41	0 PDOP	0	0	0	0	0	0	0	0	0			NA
383	ADTYNG	SD01	0 PSRAP	2	0	0	0	0	0	0	0	0	0 C	adtyng_psrap		NA
384	ADUNCONT	SD01	51 TUD	0	0	0	0	0	0	0	0	0	0			NA
385	ADUNUSET	SD01	51 TUD	0	0	0	0	0	0	0	0	0	0			NA
386	AFXAB	SD01	48	0	0	0	0	0	0	0	0	0	0			NA
387	AFXP	SD01	34 TINIT	2 KOF	0	0	0	0	0	0	0	0	0 I	arriv_fix_areas_inhibited_count		SYSTEM
388	ALRMTSF	SD01	34 MSAW	0 CONB	3	0	0	0	0	0	0	0	0			NA
389	ALSENS	SD01	21 TEXEC	0	0	0	0	0	0	0	0	0	0			NA
390	ALTIMP1	SD01	20 CRIT	0 KOFC	0 MTGA	0 PSRAP	3	0	0	0	0	0	0	ps altimeter correction		NA
391	ALTIMP2	SD01	20 PSRAP	3	0	0	0	0	0	0	0	0	0 I	alt psrap		NA
392	AOSPACE	SD01	57 PDOP	0	0	0	0	0	0	0	0	0	0			NA
393	AZIRG1	SD01	29 TSUBO	0 TSUB1	0 TINIT	2 TPRED	2	0	0	0	0	0	0 A	first aut dp range azm		SYSTEM
394	AZIRG2	SD01	29 TSUBO	0 TSUB1	0 TPRED	2 TINIT	2 TPRED	2	0	0	0	0	0 A	sec aut dep range azm		SYSTEM
395	AZIRG3	SD01	29	0 TSUBO	0 TSUB1	0 TPRED	2 TINIT	2	0	0	0	0	0 A	th rd aut dep range azm		SYSTEM
396	AZMBINS1	SD01	44	0	0	0	0	0	0	0	0	0	0	a.m rdr only		NA
397	AZMBINS2	SD01	44	0	0	0	0	0	0	0	0	0	0	azatwo rdr only		NA
398	BART	SD01	0	2	0	0	0	0	0	0	0	0	0			NA

399	BOMSHI1	SB01	55 TPUR	2	0	0	0	0	0	0	0	0	0 I	bot_track_init_scan_hit_mis	SYSTEM	0
400	BOMSHI2	SB01	55 TPUR	2	0	0	0	0	0	0	0	0	0 I	bot_purge_scan_misses_max	SYSTEM	0
401	BOSHFT	SB01	55	0	0	0	0	0	0	0	0	0	0 I	bot_window_length	SYSTEM	0
402	BOTOVT	SB01	21 TEXEC	3 TPUR	1	0	0	0	0	0	0	0	0 A	bot_overflow_count	MA	0
403	BRAFLG	SB01	14 EOF	0 BRATS	0	0	0	0	0	0	0	0	0		MA	0
404	BSECT	SB01	21 TEXEC	3 BRATS	0	0	0	0	0	0	0	0	0 A	bsect_trk	TRACK	0
405	BSECTI	SB01	21 TEXEC	3 BRATS	0	0	0	0	0	0	0	0	0 A	base_sector_numbr_trk	TRACK	0
406	BSEGT	SB01	46 MSAM	0 EOF	0	0	0	0	0	0	0	0	0		MA	0
407	CAALARM	SB01	34 CA	0	0	0	0	0	0	0	0	0	0		MA	0
408	CASENS	SB01	21 TEXEC	0	0	0	0	0	0	0	0	0	0		MA	0
409	CMSL719	SB01	57 CA	0	0	0	0	0	0	0	0	0	0		MA	0
410	CMSLALL	SB01	57 CA	0	0	0	0	0	0	0	0	0	0		MA	0
411	CMSLMEG	SB01	57 CA	0	0	0	0	0	0	0	0	0	0		MA	0
412	CMSLMEG1	SB01	57 CA	0	0	0	0	0	0	0	0	0	0		MA	0
413	CMSLMEG2	SB01	57 CA	0	0	0	0	0	0	0	0	0	0		MA	0
414	COAST1	SB01	52 TSUBO	0 TPSEC	2 TINIT	2	0	0	0	0	0	0	0 I	cst_max_scans_unassoc_beacon	SYSTEM	0
415	COAST2	SB01	52 TSUBO	0 TPSEC	2 TINIT	2	0	0	0	0	0	0	0 I	cst_max_scans_assoc_beacon	SYSTEM	0
416	COAST3	SB01	52 TSUBO	0 TPSEC	2 TINIT	2	0	0	0	0	0	0	0 I	uasc_rdr_coast_max_scans	SYSTEM	0
417	COAST4	SB01	52 TSUBO	0 TPSEC	2 TINIT	2	0	0	0	0	0	0	0 I	asc_rdr_coast_max_scans	SYSTEM	0
418	CRSENS	SB01	20 TEXEC	0 TCRSS	0	0	0	0	0	0	0	0	0		MA	0
419	CRTCSAVE	SB01	0 PSRAP	3	0	0	0	0	0	0	0	0	0 I	cur_rtc_value	MA	0
420	CSAVB5	SB01	21 CRIT	0	0	0	0	0	0	0	0	0	0		MA	0
421	CSECT	SB01	20 TEXEC	3 PSRAP	3 TUBS	0 TCRSS	2 TINIT	2	0	0	0	0	0 A	csect_trk	TRACK	0
422	CSECTI	SB01	20 TEXEC	3 PSRAP	3 TUBS	0 TCRSS	2 TINIT	2	0	0	0	0	0 I	c_work_sector_numbr	TRACK	0
423	CTBRAT	SB01	44 BRATS	0 CTIP	0	0	0	0	0	0	0	0	0		MA	0
424	CTIPLL	SB01	14	0 CTIP	0 EOF	0 RETP	0	0	0	0	0	0	0		MA	0
425	CTSOVT	SB01	21 TEXEC	3 COMA	3 SLINK	3 TPUR	3	0	0	0	0	0	0 I	cts_overflow_count	TRACK	0
426	DELXYDT1	SB01	56	0	0	0	0	0	0	0	0	0	0 R	delta_x_coord_max	SYSTEM	0
427	DELXYDT2	SB01	56	0	0	0	0	0	0	0	0	0	0 R	delta_y_coord_max	SYSTEM	0
428	DOVERT	SB01	13 FDOP	0	0	0	0	0	0	0	0	0	0		MA	0
429	DTTDUF	SB01	13 PDOP	0	0	0	0	0	0	0	0	0	0		MA	0
430	DUPIDLK	SB01	22 TUD	0 COMA	3 SLINK	0 TPSEC	0 TINIT	1 TPUR	0	0	0	0	0 L	dupid_lk_flag_trk	TRACK	0
431	DUPIDLY	SB01	18 TUD	2	0	0	0	0	0	0	0	0	0 L	dupid_clear	TRACK	0
432	DUPIDT	SB01	18 EOF	0 SLINK	0 TPSEC	2 TINIT	2 TPUR	2	0	0	0	0	0 A	dupid_tab_buff	TRACK	0
433	DUPIDY	SB01	18 COMA	3 TUD	1 SLINK	0 TPSEC	3 TINIT	3 TPUR	3	0	0	0	0 A	dupidy	TRACK	0
434	DUPMEG1	SB01	57 CA	0	0	0	0	0	0	0	0	0	0		MA	0
435	DUPP	SB01	57 CA	0	0	0	0	0	0	0	0	0	0		MA	0
436	EDSENS	SB01	20 TEXEC	1 TEDC	3	0	0	0	0	0	0	0	0 I	tedc_process_sensor_numbr	MA	6
437	ENDBOT	SB01	52 TPUR	2	0	0	0	0	0	0	0	0	0 I	bot_end_pointer	TRACK	0
438	ENDRAT	SB01	52 TCRSS	2 TPSEC	2	0	0	0	0	0	0	0	0 I	end_rat_index	TRACK	0

IBM-NR-0000

439	ENDRO1	SD01	52	IPUR	2	0	0	0	0	0	0	0	0	0			NA	0
440	ENDRP1	SD01	52	TEXEC	2 IPUR	2	0 BRATS	0 HIGA	0 HIGCI	0 TCRSS	2 ISUBO	0 TEDC	2 TINIT	2 I	trs end pointer		TRACK	0
441	ESPPP	SD01	35		0	0	0	0	0	0	0	0	0	0			NA	0
442	ETGCAFLG	SD01	35	CA	0	0	0	0	0	0	0	0	0	0			NA	0
443	EX	SD01	36		0	0	0	0	0	0	0	0	0	0			NA	0
444	FIMDS	SD01	22	TPSEC	0	0	0	0	0	0	0	0	0	0 L	funds_lk flag		TRACK	0
445	FIRMI	SD01	53	TINIT	2 IPUR	2 CATRE	0 ISUBO	0 ISUBI	0 TEDC	2 TPSEC	2	0	0	0 A	firmness_tab trk		SYSTEM	0
446	FIRST	SD01	14	TEDC	2 IPUR	2 TINIT	2 IUD	3 IPSEC	2 IFI	2 SLIMI	2	0	0	0 A	first_trk		TRACK	0
447	FIRST1	SD01	14		0	0	0	0 HIGA	0 HIGCI	0 TEDC	2 SCIME	0 IDOP	0 IPUR	2 I	first_controlled_track_file		TRACK	0
448	FIRST1	SD01	14	TINIT	2 IUD	3 SLIMI	2	0 AUI	2 IPSEC	2 COMA	2 CRIT	0 IFI	2	0 I	first_controlled_track_file		TRACK	0
449	FIRST2	SD01	14	TINIT	2 IPSEC	2 SLIMI	2 IPUR	2 AUI	0 KOF	2 IFI	2 IUD	3	0	0 I	cntrld_track_file count		TRACK	0
450	FREEZER	SD01	18	TEDC	2 IPSEC	0 TINIT	0 IPUR	0 IPRED	0 ALTRKR	0 HSAW	0 HIGA	0 HIGCI	0 TEDCPS	0			NA	0
451	FREEZER	SD01	18	TSUBO	0 TSUBI	0	0	0	0	0	0	0	0	0			NA	0
452	GALTIE	SD01	34	KOF	0 CRIT	0 HSAW	0	0	0	0	0	0	0	0			NA	0
453	GHSVB1	SD01	17	COMA	3 SLIMI	0 IPUR	0	0	0	0	0	0	0	0			NA	0
454	GHSVB5	SD01	17	COMA	3 SLIMI	0 IPUR	0	0	0	0	0	0	0	0			NA	0
455	IA1IR1	SD01	23	TINIT	2	0	0	0	0	0	0	0	0	0 A	inner_range_azm_tab		SYSTEM	0
456	IA2IR2	SD01	24	TINIT	2	0	0	0	0	0	0	0	0	0 A	sec_inner_range_azm_tab		SYSTEM	0
457	INSENS	SD01	20	TINIT	0	0	0	0	0	0	0	0	0	0 I	limit_process_sensor_numbr		NA	0
458	INSL021	SD01	57	CA	0 CALTQ	0 CATU	0 KOF	0	0	0	0	0	0	0			NA	0
459	INSLT1	SD01	57	CA	0 TROUT	0	0	0	0	0	0	0	0	0			NA	0
460	INSLT2	SD01	57	CA	0 TROUT	0	0	0	0	0	0	0	0	0			NA	0
461	IR3	SD01	24	TINIT	2	0	0	0	0	0	0	0	0	0 I	thrd_in_range_azm_sfy		SYSTEM	0
462	KOFUNLK	SD01	35	KOF	0	0	0	0	0	0	0	0	0	0			NA	0
463	LATENDT	SD01	1	TEXEC	0	0	0	0	0	0	0	0	0	0			NA	0
464	LBDTABL	SD01	44	CTIP	0	0	0	0	0	0	0	0	0	0			NA	0
465	LSR1TNP	SD01	51	TDOP	0 TRAD	2	0	0	0	0	0	0	0	0			NA	0
466	LSR1TNP	SD01	51	CALERT	0 COMA	2 COMB	2 COMC	2 DOP	0 IFI	0 IFO	0 KTP	0 KVF	0 MPEB	0			NA	0
467	LSR2TNP	SD01	51	DBATH	0 TEDCRS	0 TINIT	0 IPRED	0 IPSEC	0	0	0	0	0	0			NA	0
468	LSR2TNP	SD01	51	SLIMI	0 COMA	2 IFI	2 KOF	0	0	0 MAT	2 MSAW	0 MTP	0 SMOTH	0			NA	0
469	MALM	SD01	34		0 COMB	3	0	0	0	0	0	0	0	0			NA	0
470	MALRM	SD01	34	MSAW	0 CATU	0 COMB	3	0	0	0	0	0	0	0			NA	0
471	MATTIM	SD01	35	MAT	3	0	0	0	0	0	0	0	0	0			NA	0
472	MSAMALZO	SD01	34	MSAW	0	0	0	0	0	0	0	0	0	0			NA	0
473	MSAMEF2	SD01	35	MSAW	0 COB	0	0	0	0	0	0	0	0	0			NA	0
474	MSCORI	SD01	35	ALTRKR	0 ALTRER1	0 KOF	0 TSUBO	0 TSUBL	0	0	0	0	0	0			NA	0
475	MSSENS	SD01	21	TEXEC	0 MSAW	0	0	0	0	0	0	0	0	0			NA	0
476	MIOPOR1	SD01	45		0	0	0	0	0	0	0	0	0	0			NA	0
477	MIOPT	SD01	47	TPSEC	0 IPUR	0 TRAD	2	0 SLIMI	0 TEDC	2 TCRSS	0	0	0	0			NA	0
478	MIOPT	SD01	47	KOF	0	0	0 MSAW	0 MTP	0	0 TDOP	2	0 TINIT	2 TPRED	0			NA	0

479	MIOPI	SD01	47	0 CALERT	0 CATRE	0 COMA	2 COMB	2	0 DBAIN	0 IILE	2 MAT	2 RIP	0			NA	0	
480	MMDBMOE1	SD01	45 IFO	0 RIP	0	0	0	0	0	0	0	0	0			NA	0	
481	MRDBMOE1	SD01	45	0	0	0	0	0	0	0	0	0	0			NA	0	
482	MSENSOR1	SD01	45 AUT	2 TPUR	2 CDR	2 COMA	2 COMC	2 CRIT	0 IFT	2 IFO	0 KOF	2	0 I	number_sensors_sparm		SYSTEM	0	
483	MSENSOR1	SD01	47 TEDCRS	0 TEXEC	2 TINIT	3 TPUR	1 TRAD	2 TROUT	2 TSUBO	0	0 TPUR	2 TEDC	2 I	number_sensors_sparm		SYSTEM	0	
484	MSENSOR1	SD01	47	0 MSAW	0 MTGA	0 MTGCT	0 PAUS	2	0 TPSEC	2 SCTME	2 SLTME	2 SWABS	0 I	number_sensors_sparm		SYSTEM	0	
485	MTRK	SD01	22 COMA	3 SLTME	0 TPUR	0	0	0	0	0	0	0	0 L	mtrk_subroutine_is_locked_out		TRACK	0	
486	NUMDQE1	SD01	45 CRIT	0 MSGA	0 MSGCT	0 SWABS	0	0	0	0	0	0	0 I	num_diply_sparm		SYSTEM	0	
487	NUMEQE1	SD01	45 CRIT	0	0	0	0	0	0	0	0	0	0 I	num_keyd_sparm		SYSTEM	0	
488	NUMTQE1	SD01	46 CDR	2 CRIT	0 IFT	0 MAT	2 MTGCT	0 MTP	0 PSBLD	0 SWABS	0 TUD	2 TUDS	2 I	num_tks_sparm		SYSTEM	0	
489	NXTRAD	SD01	35 COMC	3	0	0	0	0	0	0	0	0	0			NA	0	
490	OA10R1	SD01	23 TINIT	2	0	0	0	0	0	0	0	0	0 I	first_out_range_azm		SYSTEM	0	
491	OA20R2	SD01	23 TINIT	2	0	0	0	0	0	0	0	0	0 I	sec_out_range_azm		SYSTEM	0	
492	OA30R3	SD01	24 TINIT	2	0	0	0	0	0	0	0	0	0 I	third_out_range_azm		SYSTEM	0	
493	ORTCSAVE	SD01	0 PSRAP	3	0	0	0	0	0	0	0	0	0 I	old_rtc_value		NA	0	
494	OSPACE	SD01	57 PDOP	0	0	0	0	0	0	0	0	0	0			NA	0	
495	OSPACE1	SD01	57	0	0	0	0	0	0	0	0	0	0			NA	0	
496	OSPACE2	SD01	57	0	0	0	0	0	0	0	0	0	0			NA	0	
497	OSPACE3	SD01	57	0	0	0	0	0	0	0	0	0	0			NA	0	
498	PAUST	SD01	1 PAUS	0 PSBLD	0	0	0	0	0	0	0	0	0			NA	0	
499	PBUFCT1	SD01	0	0	0	0	0	0	0	0	0	0	0			NA	0	
500	PBUFCT2	SD01	0	0	0	0	0	0	0	0	0	0	0 I	dsply_buffer_length		NA	0	
501	PBUP	SD01	0	0	0	0	0	0	0	0	0	0	0			NA	0	
502	PRSEMS	SD01	20 TPRCB	0	0	0	0	0	0	0	0	0	0 I	tpred_process_sensor_numbr		NA	0	
503	PSSEMS	SD01	20 TPSEC	0	0	0	0	0	0	0	0	0	0			NA	0	
504	PUSEMS	SD01	20 TEXEC	0	0	0	0	0	0	0	0	0	0			NA	0	
505	RAADT	SD01	34 MSAW	0 COMB	3	0	0	0	0	0	0	0	0			NA	0	
506	RATPIT	SD01	21 TCRSS	3	0	0	0	0	0	0	0	0	0 A	rat_pointer_tab		TRACK	0	
507	RATPIT1	SD01	21 TCRSS	3	0	0	0	0	0	0	0	0	0 I	rat_sec_num		TRACK	0	
508	RATPIT2	SD01	21 TCRSS	3	0	0	0	0	0	0	0	0	0 I	f_rat_in_sec		TRACK	0	
509	RATXIT	SD01	21 TCRSS	3	0	0	0	0	0	0	0	0	0 A	rat_nxt_slot_tab		TRACK	0	
510	RATXIT1	SD01	21 TCRSS	3	0	0	0	0	0	0	0	0	0 I	rat_next_slot_index		TRACK	0	
511	RATXIT2	SD01	21 TCRSS	0	0	0	0	0	0	0	0	0	0			NA	0	
512	RATXIT3	SD01	21 TCRSS	3	0	0	0	0	0	0	0	0	0 I	rat_final_index		TRACK	0	
513	RBMSHT1	SD01	55 TPUR	2	0	0	0	0	0	0	0	0	0 I	bart_t_init_scan_hit_min		SYSTEM	0	
514	RBMSHT2	SD01	55 TPUR	2	0	0	0	0	0	0	0	0	0 I	bart_t_purge_scan_miss_max		SYSTEM	0	
515	RBSHFT	SD01	55 TPUR	2	0	0	0	0	0	0	0	0	0 I	bart_window_length		SYSTEM	0	
516	RMGBINS1	SD01	44 PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0	
517	RMGBINS2	SD01	44	0	0	0	0	0	0	0	0	0	0			NA	0	
518	RMMSHT1	SD01	56 TPUR	0	0	0	0	0	0	0	0	0	0			NA	0	

519	AUSNF1	SD01	56 TPUR	0	0	0	0	0	0	0	0	0	0			NA	0
520	AUSNT2	SD01	56 TPUR	0	0	0	0	0	0	0	0	0	0			NA	0
521	AUTOVT	SD01	21 TEXEC	0	0	0	0	0	0	0	0	0	0			NA	0
522	AUTSPED	SD01	56 TPSEC	2 TPUR	0 TSUBO	0 TSUB1	0	0	0	0	0	0	0	R	rdr_p_clutter_max_speed	SYSTEM	0
523	RPCTR1	SD01	17	0 MTGA	0 MTGCT	0	0	0	0	0	0	0	0			NA	0
524	RPCTR2	SD01	17	0 MTGA	0 MTGCT	0	0	0	0	0	0	0	0			NA	0
525	RPCTR3	SD01	17	0 MTGA	0 MTGCT	0	0	0	0	0	0	0	0			NA	0
526	RTCMASK1	SD01	55 CATU	0	0 PSRAP	0 TEXEC	0 TSUBO	0 TSUB1	0	0	0	0	0		rtc_mask	NA	0
527	S2TIME	SD01	2	0 EOF	0	0	0	0	0	0	0	0	0			NA	0
528	SALARMS1	SD01	11	0	0	0	0	0	0	0	0	0	0			NA	0
529	SALARMS2	SD01	11	0	0	0	0	0	0	0	0	0	0			NA	0
530	SALTBCD1	SD01	6 PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
531	SALTBCD2	SD01	6 PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
532	SALTBCD3	SD01	6 PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
533	SALTBCD4	SD01	6 PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
534	SALTBCD5	SD01	6 PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
535	SALTBCD6	SD01	6 PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
536	SASTIT	SD01	15 TEXEC	3 TEDC	2 TPUR	2 BRATS	0 MTGCT	0 TEDCRS	0 TSUBO	0 TCRSS	2	0	0	A	sast_trk	TRACK	0
537	SASTIT1	SD01	15 TEXEC	3 TEDC	2 TPUR	2 BRATS	0 MTGCT	0 TEDCRS	0 TSUBO	0 TCRSS	2 TINIT	2	0	I	sast_str_trs_starting_index	TRACK	0
538	SASTIT2	SD01	15 TEXEC	3 TEDC	2 TPUR	2 BRATS	0 MTGCT	0 TEDCRS	0 TSUBO		0	0	0	I	sast_sec_numbr_of_targets	TRACK	0
539	SBAOT	SD01	12	0	0	0	0	0	0	0	0	0	0			NA	0
540	SBBAA	SD01	12	0	0	0	0	0	0	0	0	0	0			NA	0
541	SBBFBT	SD01	11	0	0	0	0	0	0	0	0	0	0			NA	0
542	SBBFO	SD01	12	0	0	0	0	0	0	0	0	0	0			NA	0
543	SBBMA	SD01	12	0	0	0	0	0	0	0	0	0	0			NA	0
544	SBBRA	SD01	12	0	0	0	0	0	0	0	0	0	0			NA	0
545	SBBRP	SD01	11	0	0	0	0	0	0	0	0	0	0			NA	0
546	SBBALNT	SD01	42	0	0	0	0	0	0	0	0	0	0			NA	0
547	SBDFO	SD01	12	0	0	0	0	0	0	0	0	0	0			NA	0
548	SBIC	SD01	11	0	0	0	0	0	0	0	0	0	0			NA	0
549	SBTE	SD01	12	0	0	0	0	0	0	0	0	0	0			NA	0
550	SBRCWO	SD01	12	0	0	0	0	0	0	0	0	0	0			NA	0
551	SBSENS	SD01	21 TEXEC	0	0	0	0	0	0	0	0	0	0			NA	0
552	SBIO	SD01	11	0	0	0	0	0	0	0	0	0	0			NA	0
553	SBTIMO	SD01	12	0	0	0	0	0	0	0	0	0	0			NA	0
554	SCALM	SD01	43	0	0	0	0	0	0	0	0	0	0			NA	0
555	SCANIT	SD01	22 TPSEC	2 TINIT	0 TPUR	2 TPRED	2 ALTRER	0 ALTRER1	0 CATRE	0 CATU	0 MSAW	0 PSRAP	3	A	s_scan_time	TRACK	4
556	SCANOT1	SD01	11 PSRAP	2	0	0	0	0	0	0	0	0	0	R	calc_delta_scan_time	NA	0
557	SCANOT2	SD01	11 PSRAP	1	0	0	0	0	0	0	0	0	0	R	act_delta_scan_time	NA	0
558	SCTMET1	SD01	1 SCTME	0 TEXEC	0	0	0	0	0	0	0	0	0			NA	0

559	SCIME12	SD01	1	SCIME	0	IEXEC	0	0	0	0	0	0	0	0	0			NA	0
560	SCIME13	SD01	1	SCIME	0	IEXEC	0	0	0	0	0	0	0	0	0			NA	0
561	SCIME14	SD01	1	SCIME	0	IEXEC	0	0	0	0	0	0	0	0	0			NA	0
562	SCIME15	SD01	1	SCIME	0	IEXEC	0	0	0	0	0	0	0	0	0			NA	0
563	SECLST	SD01	21	IEXEC	0		0	0	0	0	0	0	0	0	0	0	lost_sector_count	NA	0
564	SEMBR1	SD01	21	SLINK	3		0	0	0	0	0	0	0	0	0	0	slink_prim_sensor	TRACK	0
565	SEMBR2	SD01	21	SLINK	3		0	0	0	0	0	0	0	0	0	0	slink_secnd_sensor	TRACK	0
566	SENSN1	SD01	20	IEXEC	3	INIT	2	0	0	0	0	0	0	0	0	0	trk_sensor_numbr	TRACK	0
567	SHTHRES1	SD01	10	PSRAP	3		0	0	0	0	0	0	0	0	0	0	s_report_quality_code	PSRAP	0
568	SHTHRES2	SD01	10	PSRAP	2		0	0	0	0	0	0	0	0	0	0	s_rep_hit_count_min	NA	0
569	SIP180B	SD01	7	PSRAP	3		0	0	0	0	0	0	0	0	0	0	sec_180_deg_behind_numbr	NA	0
570	SIPALRT1	SD01	41		0		0	0	0	0	0	0	0	0	0	0		NA	0
571	SIPALRT2	SD01	41		0		0	0	0	0	0	0	0	0	0	0		NA	0
572	SIPALRT3	SD01	41		0		0	0	0	0	0	0	0	0	0	0		NA	0
573	SIPANSES	SD01	43		0		0	0	0	0	0	0	0	0	0	0		NA	0
574	SIPB7	SD01	6		0		0	0	0	0	0	0	0	0	0	0		NA	0
575	SIPBUF	SD01	3	PSRAP	2		0	0	0	0	0	0	0	0	0	0	A	ps_in_bf_len	NA	0
576	SIPCLRTC	SD01	9	PSRAP	3		0	0	0	0	0	0	0	0	0	0		psrap_alarm_counter_clear_rtc	NA	0
577	SIPCLTIM	SD01	9		0		0	0	0	0	0	0	0	0	0	0			NA	0
578	SIPCLTIM	SD01	9	PSRAP	2		0	0	0	0	0	0	0	0	0	0	I	psrap_time_to_clear_error_cnt	NA	0
579	SIPCQT	SD01	9	PSRAP	3		0	0	0	0	0	0	0	0	0	0	I	ps_curr_sec_quadl_numbr	NA	0
580	SIPCSH	SD01	0	PSRAP	3		0	0	0	0	0	0	0	0	0	0		ps_in_fail_sequence_flag	NA	0
581	SIPCST	SD01	7	PSRAP	3		0	0	0	0	0	0	0	0	0	0	I	ps_del_scan_time_sua	NA	0
582	SIPCSU	SD01	8	PSRAP	3		0	0	0	0	0	0	0	0	0	0	L	synth_update_enabl	NA	0
583	SIPCTT	SD01	7	PSRAP	3		0	0	0	0	0	0	0	0	0	0	I	reports_in_trs	NA	0
584	SIPD	SD01	12		0		0	0	0	0	0	0	0	0	0	0			NA	0
585	SIPE	SD01	12		0		0	0	0	0	0	0	0	0	0	0			NA	0
586	SIPENDI1	SD01	4	PSRAP	3		0	0	0	0	0	0	0	0	0	0	I	s_in_start_index	NA	0
587	SIPENDI2	SD01	4	PSRAP	3		0	0	0	0	0	0	0	0	0	0	I	temp_input_start_index	NA	0
588	SIPFAIL1	SD01	4	PSRAP	0		0	0	0	0	0	0	0	0	0	0		cnsctv_fail_cnt	NA	0
589	SIPFAIL2	SD01	4	PSRAP	0		0	0	0	0	0	0	0	0	0	0		time_last_fail	NA	0
590	SIPFDS	SD01	0	PSRAP	2		0	0	0	0	0	0	0	0	0	0		sipfds_temp_psrap	NA	0
591	SIPFLG11	SD01	4		0		0	0	0	0	0	0	0	0	0	0			NA	0
592	SIPFLG12	SD01	4		0		0	0	0	0	0	0	0	0	0	0			NA	0
593	SIPFLG13	SD01	4		0		0	0	0	0	0	0	0	0	0	0			NA	0
594	SIPFLG14	SD01	4		0		0	0	0	0	0	0	0	0	0	0			NA	0
595	SIPFLG15	SD01	4		0		0	0	0	0	0	0	0	0	0	0			NA	0
596	SIPFLG16	SD01	4		0		0	0	0	0	0	0	0	0	0	0			NA	0
597	SIPFLG17	SD01	4		0		0	0	0	0	0	0	0	0	0	0			NA	0
598	SIPFLG18	SD01	4		0		0	0	0	0	0	0	0	0	0	0			NA	0

599	SIPFIRTL	SDB1	5	PSRAP	0	0	0	0	0	0	0	0	0	0		time_first_should_fail	MA	0
600	SIPICIN	SDB1	12	PSRAP	1	0	0	0	0	0	0	0	0	0	1	init_psr_input	MA	0
601	SIPICIN1	SDB1	12	PSRAP	0	0	0	0	0	0	0	0	0	0			MA	0
602	SIPICIN5	SDB1	12	PSRAP	0	0	0	0	0	0	0	0	0	0			MA	0
603	SIPIDER	SDB1	5	PSRAP	3	0	0	0	0	0	0	0	0	0	1	missing_msg_id_count	MA	0
604	SIPIFG1	SDB1	4	PSRAP	2	0	0	0	0	0	0	0	0	0		ps_sectr_mb_cntr	PSRAP	0
605	SIPIFLG2	SDB1	4	PSRAP	1	0	0	0	0	0	0	0	0	0	1	ps_init_flag	MA	0
606	SIPINADR	SDB1	39	PSRAP	0	0	0	0	0	0	0	0	0	0			MA	0
607	SIPIND1	SDB1	6	PSRAP	0	0	0	0	0	0	0	0	0	0		ps_input_words_to_proc	MA	0
608	SIPIND2	SDB1	6	PSRAP	0	0	0	0	0	0	0	0	0	0		ps_input_words_proc	MA	0
609	SIPIPCI1	SDB1	5	PSRAP	0	0	0	0	0	0	0	0	0	0			MA	0
610	SIPIPCI2	SDB1	5	PSRAP	0	0	0	0	0	0	0	0	0	0			MA	0
611	SIPIPEX1	SDB1	5	PSRAP	3	0	0	0	0	0	0	0	0	0		sect_num_init	MA	0
612	SIPIPEX2	SDB1	5	PSRAP	3	0	0	0	0	0	0	0	0	0	1	s_in_par_proc_start_index	MA	0
613	SIPITOI	SDB1	3	PSRAP	3	0	0	0	0	0	0	0	0	0		input_tbl_overf_index	MA	0
614	SIPITOI2	SDB1	3	PSRAP	0	0	0	0	0	0	0	0	0	0			MA	0
615	SIPLAB	SDB1	40	PSRAP	0	0	0	0	0	0	0	0	0	0			MA	0
616	SIPLLP	SDB1	40	PSRAP	0	0	0	0	0	0	0	0	0	0			MA	0
617	SIPLOH	SDB1	7	PSRAP	0	0	0	0	0	0	0	0	0	0			MA	0
618	SIPMOC	SDB1	0	PSRAP	3	0	0	0	0	0	0	0	0	0	A	rdt_msg_store	MA	0
619	SIPMOC2	SDB1	0	PSRAP	0	0	0	0	0	0	0	0	0	0			MA	0
620	SIPMOC3	SDB1	0	PSRAP	0	0	0	0	0	0	0	0	0	0			MA	0
621	SIPMOC4	SDB1	0	PSRAP	0	0	0	0	0	0	0	0	0	0			MA	0
622	SIPMOC5	SDB1	0	PSRAP	0	0	0	0	0	0	0	0	0	0			MA	0
623	SIPMOC6	SDB1	0	PSRAP	0	0	0	0	0	0	0	0	0	0			MA	0
624	SIPMOI1	SDB1	0	PSRAP	3	0	0	0	0	0	0	0	0	0	L	flag_to_clk_msg_buffer	MA	0
625	SIPMOI2	SDB1	0	PSRAP	3	0	0	0	0	0	0	0	0	0		num_words_msg_buf	MA	0
626	SIPNTB	SDB1	8	PSRAP	0	0	0	0	0	0	0	0	0	0			MA	0
627	SIPNIP1	SDB1	8	PSRAP	0	0	0	0	0	0	0	0	0	0			MA	0
628	SIPNIP2	SDB1	8	PSRAP	0	0	0	0	0	0	0	0	0	0			MA	0
629	SIPNCA	SDB1	38	PSRAP	2	0	0	0	0	0	0	0	0	0			MA	0
630	SIPOLS1	SDB1	9	PSRAP	0	0	0	0	0	0	0	0	0	0			MA	0
631	SIPOLS2	SDB1	9	PSRAP	0	0	0	0	0	0	0	0	0	0			MA	0
632	SIPOSU	SDB1	8	PSRAP	3	0	0	0	0	0	0	0	0	0	L	s_synthet_update_is_disabled	MA	0
633	SIPOSU2	SDB1	8	PSRAP	0	0	0	0	0	0	0	0	0	0			MA	0
634	SIPPBI	SDB1	2	PSRAP	0	0	0	0	0	0	0	0	0	0			MA	0
635	SIPPSEMS	SDB1	0	PSRAP	0	0	0	0	0	0	0	0	0	0			MA	0
636	SIPPUL	SDB1	3		0	0	0	0	0	0	0	0	0	0			MA	0
637	SIPRAC1	SDB1	12	PSRAP	0	0	0	0	0	0	0	0	0	0			MA	0
638	SIPRAC3	SDB1	12	PSRAP	0	0	0	0	0	0	0	0	0	0			MA	0

639	SIPRBL	SDB1	38	PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
640	SIPRBU	SDB1	38	PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
641	SIPRIC	SDB1	12	PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
642	SIPRICT1	SDB1	40	PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
643	SIPRICT2	SDB1	40	PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
644	SIPROT1	SDB1	9	PSRAP	3	0	0	0	0	0	0	0	0	0		last_print1_rtc	NA	0
645	SIPROT2	SDB1	9	PSRAP	3	0	0	0	0	0	0	0	0	0		print1_delta_rtc	NA	0
646	SIPRTC	SDB1	7	PSRAP	3	0	0	0	0	0	0	0	0	0	R	temp_rtc_value	NA	0
647	SIPSB	SDB1	3	PSRAP	2	0	0	0	0	0	0	0	0	0	I	ps_in_buffer_pointer	NA	0
648	SIPSBAD	SDB1	40		0	0	0	0	0	0	0	0	0	0			NA	0
649	SIPSBAD	SDB1	40	PSRAP	2	0	0	0	0	0	0	0	0	0			NA	0
650	SIPSBI1	SDB1	3	PSRAP	1	0	0	0	0	0	0	0	0	0	I	s_tout_error_count	NA	0
651	SIPSBI2	SDB1	3	PSRAP	1	0	0	0	0	0	0	0	0	0	I	srap_last_work_input_buf_ptr	NA	0
652	SIPSBINS	SDB1	3	PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
653	SIPSENS1	SDB1	5	PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
654	SIPSENS2	SDB1	5	PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
655	SIPSEZ1	SDB1	7	PSRAP	3	0	0	0	0	0	0	0	0	0	L	ps_sec_mark_zero_was_found	PSRAP	0
656	SIPSEZ2	SDB1	7	PSRAP	3	0	0	0	0	0	0	0	0	0	L	ps_sec_zero_m_is_expectd	PSRAP	0
657	SIPSFM	SDB1	0	PSRAP	2	0	0	0	0	0	0	0	0	0	I	sipsfm	NA	0
658	SIPSFT1	SDB1	9	PSRAP	0	0	0	0	0	0	0	0	0	0		last_print2_rtc	NA	0
659	SIPSFT2	SDB1	9	PSRAP	0	0	0	0	0	0	0	0	0	0		print2_delta_rtc	NA	0
660	SIPSIC	SDB1	7	PSRAP	3	0	0	0	0	0	0	0	0	0	R	ps_delta_sector_time	PSRAP	0
661	SIPSME1	SDB1	6	PSRAP	3	0	0	0	0	0	0	0	0	0	I	ps_sec_out_of_seq_count	PSRAP	0
662	SIPSME2	SDB1	6	PSRAP	3	0	0	0	0	0	0	0	0	0	I	ps_next_expectd_sector_numbr	PSRAP	0
663	SIPSSF1	SDB1	8	PSRAP	3	0	0	0	0	0	0	0	0	0	L	s_has_started_up	PSRAP	0
664	SIPSSF2	SDB1	8	PSRAP	3	0	0	0	0	0	0	0	0	0	L	s_sec_mk_is_late	NA	0
665	SIPSTART	SDB1	5	PSRAP	1	0	0	0	0	0	0	0	0	0		s_startup_rtc	PSRAP	0
666	SIPSTAT	SDB1	2	PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
667	SIPSTS	SDB1	10	PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
668	SIPSTS1	SDB1	10	PSRAP	3	0	0	0	0	0	0	0	0	0	I	s_invalid_sector_mark_count	PSRAP	0
669	SIPSTS2	SDB1	10	PSRAP	2	0	0	0	0	0	0	0	0	0	I	s_inv_sector_max	PSRAP	0
670	SIPSZI	SDB1	40	PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
671	SIPT	SDB1	7	PSRAP	3	0	0	0	0	0	0	0	0	0	R	s_nxt_sector_declare_rtc	NA	0
672	SIPTEMP	SDB1	6	PSRAP	2	0	0	0	0	0	0	0	0	0	A	ps_in_msg_temp_store	NA	0
673	SIPTEMP2	SDB1	6	PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
674	SIPTEMP3	SDB1	6	PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
675	SIPTEMP4	SDB1	6	PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
676	SIPTEMP5	SDB1	6	PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
677	SIPTEMP6	SDB1	6	PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
678	SIPTIO	SDB1	13	PSRAP	0	0	0	0	0	0	0	0	0	0		srap_term_i/o	NA	0

679	SIPTIM3	SD01	13	PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
680	SIPILT	SD01	4	PSRAP	3	0	0	0	0	0	0	0	0	0	R	last change rtc	NA	0
681	SIPTMG1	SD01	0	PSRAP	1	0	0	0	0	0	0	0	0	0		siptmg1	NA	0
682	SIPTMG2	SD01	0	PSRAP	1	0	0	0	0	0	0	0	0	0		siptmg2	NA	0
683	SIPTMG3	SD01	0	PSRAP	1	0	0	0	0	0	0	0	0	0		siptmg3	NA	0
684	SIPTMG4	SD01	0	PSRAP	1	0	0	0	0	0	0	0	0	0		siptmg4	NA	0
685	SIPTRK1	SD01	6	PSRAP	3	0	0	0	0	0	0	0	0	0	A	ps_temp_targ store	NA	0
686	SIPTRK2	SD01	6	PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
687	SIPTRK3	SD01	6	PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
688	SIPTRK4	SD01	6	PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
689	SIPTRK5	SD01	6	PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
690	SIPTRK6	SD01	6	PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
691	SIPTIF1	SD01	10	PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
692	SIPTIF2	SD01	10	PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
693	SIPULL	SD01	41	PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
694	SIPUSH	SD01	40	PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
695	SIPWS21	SD01	8	PSRAP	3	0	0	0	0	0	0	0	0	0	I	s_sec_0_wait_scan_count	NA	0
696	SIPWS22	SD01	8	PSRAP	2	0	0	0	0	0	0	0	0	0	I	s_sect_0_wait_scan_max	NA	0
697	SLC3LK	SD01	38	PSRAP	0	0	0	0	0	0	0	0	0	0			NA	0
698	SLCLK	SD01	38	SLINK	0	TINIT	0	0	0	0	0	0	0	0			NA	0
699	SLCNTCL	SD01	38	SLINK	0	0	0	0	0	0	0	0	0	0			NA	0
700	SLGLK	SD01	38	SLINK	0	IPSEC	0	TINIT	0	IPUR	0	0	0	0	0	0	NA	0
701	SLMKTM	SD01	1	SLINK	3	0	0	0	0	0	0	0	0	0	I	slink_entry_rtc	TRACE	0
702	SL17LK	SD01	39		0	COMA	0	0	0	0	0	0	0	0			NA	0
703	SLTILK	SD01	39		0	0	0	0	0	0	0	0	0	0			NA	0
704	SLTRK	SD01	1	SLINK	3	0	0	0	0	0	0	0	0	0	I	slink_track_was_found	TRACE	0
705	SMPOFF	SD01	12		0	0	0	0	0	0	0	0	0	0			NA	0
706	SMPRBS	SD01	12		0	0	0	0	0	0	0	0	0	0			NA	0
707	SMPRDF	SD01	12		0	0	0	0	0	0	0	0	0	0			NA	0
708	SMPRT	SD01	12		0	0	0	0	0	0	0	0	0	0			NA	0
709	SMPSF	SD01	12		0	SD01RO	0	0	0	0	0	0	0	0			NA	0
710	SMPTO	SD01	12		0	SD01RO	0	0	0	0	0	0	0	0			NA	0
711	SNRORP1	SD01	10	PSRAP	3	CDR	2	0	0	0	0	0	0	0	I	s_rdr_p_report_count	NA	0
712	SNRORP2	SD01	10	PSRAP	2	CDR	2	0	0	0	0	0	0	0	I	s_rd_o_max_report	NA	0
713	SOVERT	SD01	8	PSRAP	0		0	0	0	0	0	0	0	0			NA	0
714	SRAOT	SD01	11		0	SD01RO	0	0	0	0	0	0	0	0			NA	0
715	SRAPNT1	SD01	3	PSRAP	0		0	0	0	0	0	0	0	0			NA	0
716	SRAPNT2	SD01	3	PSRAP	0		0	0	0	0	0	0	0	0			NA	0
717	SRAPOFF	SD01	2	PSRAP	2	EOF	0	0	0	0	0	0	0	0	I	s_enabled	NA	0
718	SRIC	SD01	11		0	SD01RO	0	0	0	0	0	0	0	0			NA	0

719	SRETFLAG	SDB1	2	0 KOF	0	0	0	0	0	0	0	0	0		NA	0
720	SRPTC1	SDB1	6 PSRAP	3	0	0	0	0	0	0	0	0	0 I	s_trs_index	NA	0
721	SRPTC2	SDB1	6 PSRAP	3	0	0	0	0	0	0	0	0	0 I	s_c_sector_report_count	PSRAP	0
722	SRRDAA	SDB1	11	0 SDB1RO	0	0	0	0	0	0	0	0	0		NA	0
723	SRRDE	SDB1	11	0 SDB1RO	0	0	0	0	0	0	0	0	0		NA	0
724	SRRDRA	SDB1	11	0 SDB1RO	0	0	0	0	0	0	0	0	0		NA	0
725	SRRDT	SDB1	11	0 SDB1RO	0	0	0	0	0	0	0	0	0		NA	0
726	SRRFQ	SDB1	11	0 SDB1RO	0	0	0	0	0	0	0	0	0		NA	0
727	SRRQ	SDB1	11	0 SDB1RO	0	0	0	0	0	0	0	0	0		NA	0
728	SRRRP	SDB1	11	0 SDB1RO	0	0	0	0	0	0	0	0	0		NA	0
729	SRRSDT	SDB1	11	0 SDB1RO	0	0	0	0	0	0	0	0	0		NA	0
730	SRRTQ	SDB1	11	0 SDB1RO	0	0	0	0	0	0	0	0	0		NA	0
731	SRSINX1	SDB1	0 PSRAP	3	0	0	0	0	0	0	0	0	0 I	s_next_avail_trs_index	NA	0
732	SRTIMD	SDB1	11	0 SDB1RO	0	0	0	0	0	0	0	0	0		NA	0
733	STACK10	SDB1	18 TPSEC	0 CDR	0	0	0 COMC	0 MSAW	0 RCOMR	0 SLIMI	0 TINIT	0 TPUR	0		NA	0
734	STAROR	SDB1	10	0 KOF	0	0 PDOP	3	0	0	0	0	0	0		NA	0
735	STIMEIT	SDB1	16 TPSEC	2	0	0	0	0	0	0	0	0	0 A	stime_trk	TRACK	0
736	STMOV1	SDB1	22 TEXEC	0 PAUS	0 TRAD	3 PSRAP	0	0	0	0	0	0	0		NA	0
737	STTAZM1	SDB1	41 PSRAP	0	0	0	0	0	0	0	0	0	0		NA	0
738	STTAZM2	SDB1	41	0	0	0	0	0	0	0	0	0	0		NA	0
739	STTRNG1	SDB1	41	0	0	0	0	0	0	0	0	0	0		NA	0
740	STTRNG2	SDB1	41	0	0	0	0	0	0	0	0	0	0		NA	0
741	STTSTR	SDB1	10	0	0	0	0	0	0	0	0	0	0		NA	0
742	SWAZ1RG1	SDB1	51 SWABS	0	0	0	0	0	0	0	0	0	0		NA	0
743	SWAZ2RG2	SDB1	51 SWABS	0	0	0	0	0	0	0	0	0	0		NA	0
744	SWITOVER	SDB1	2 PSRAP	0 KOF	0	0	0	0	0	0	0	0	0		NA	0
745	SWOVAR1	SDB1	51 SWABS	0	0	0	0	0	0	0	0	0	0		NA	0
746	SWOVAR2	SDB1	51 SWABS	0	0	0	0	0	0	0	0	0	0		NA	0
747	SWSEMS	SDB1	2	0 KOF	0	0	0	0	0	0	0	0	0		NA	0
748	SWUNRS	SDB1	51 SWABS	0	0	0	0	0	0	0	0	0	0		NA	0
749	SYSLOAD	SDB1	1 TEXEC	0	0	0	0	0	0	0	0	0	0		NA	0
750	SYSRQ	SDB1	46 KOF	0 MTGCT	0 PSRAP	2	0	0	0	0	0	0	0 A	rdr_proc_disable_tab	NA	0
751	SZALARM	SDB1	41	0	0	0	0	0	0	0	0	0	0		NA	0
752	TALTIMP1	SDB1	20 KOF	0 MTGA	0	0	0	0	0	0	0	0	0		NA	0
753	TALTIMP2	SDB1	20	0	0	0	0	0	0	0	0	0	0		NA	0
754	TBCNT	SDB1	35 TINIT	0 COMA	1 KDFA	0 MAT	3	0	0	0	0	0	0		NA	0
755	TERMTRL	SDB1	22	0	0	0	0	0	0	0	0	0	0		NA	0
756	TESTFLG	SDB1	13 KOFB	0 KOF	0 PDOP	0	0	0	0	0	0	0	0		NA	0
757	TGTGEN1	SDB1	17 TPSEC	0 TIMIT	0 TPUR	0 TPRED	0	0 TEDC	2 ALTRER	0 CDR	2 KOF	0	0		NA	0
758	TGTGEN2	SDB1	17 TPRED	0 TINIT	0	0	0 TSUBI	2 MSAW	0 MTGA	0 MIAFI	0 TEDCRS	0 TSUBV	0		NA	0

759	IRDEL	SDB1	17 COMA	3 SLINK	0 IPUR	0	0	0	0	0	0	0	0		NA	0
760	IMSCORI	SDB1	35 ALIRKRI	0 KOF	0 ISUBO	0 ISUBI	0	0	0	0	0	0			NA	0
761	IQRI	SDB1	57 IEDC	2 IINIT	1 IPSEC	2 IPUR	2 IPRED	0	0	0	0	0	0	total track number max	SYSTEM	0
762	IQR2	SDB1	57 IPRED	2 IPSEC	2	0	0	0	0	0	0	0	0	normal track number max	SYSTEM	0
763	IRANI	SDB1	35 ?	0	0	0	0	0	0	0	0	0	0		NA	0
764	IRATI	SDB1	56 IERSS	2	0	0	0	0	0	0	0	0	0	raf length	SYSTEM	0
765	IRAI2	SDB1	56 IERSS	0	0	0	0	0	0	0	0	0	0	raf minus 1	SYSTEM	0
766	IRAXIP	SDB1	47 SLINK	2	0	0	0	0	0	0	0	0	0	x record translation tab	SYSTEM	0
767	IRAYIP	SDB1	46 SLINK	2	0	0	0	0	0	0	0	0	0	y record translation tab	SYSTEM	0
768	IRKXI	SDB1	45 SLINK	0 IERSS	0 IPSEC	0 IINIT	0 IROUT	0 IERR	0 KOF	0 ABT	0 IMSG	0 IDA	0		NA	0
769	IRKXI2	SDB1	45 IEDC	0 IERSS	0 IPSEC	0 IINIT	0 IROUT	0 IERR	0 IPRED	0 IDA	0 SLINK	0 IQR	0		NA	0
770	IRSENS	SDB1	20 IROUT	3	0	0	0	0	0	0	0	0	0	fatal proc - sensor numbe	NA	0
771	IRSIZ0X1	SDB1	46	0	0	0	0	0	0	0	0	0	0	rdr words per vector max	SYSTEM	0
772	IRSIZ0X2	SDB1	46	0	0	0	0	0	0	0	0	0	0		NA	0
773	ISFBC	SDB1	22 IPSEC	0 COMA	3 KOF	0	0	0 ISUBO	0 SLINK	0 IEDC	2 IIRCI	0 IPUR	0		NA	0
774	ISSSIT	SDB1	16 IROUT	2	0 SDBIRO	0 IPUR	0 IPSEC	2 IEDC	2 IERSS	2 IPRED	2 IQR	1	0	tsss tbl	TRACK	0
775	ISSSIFIA	SDB1	16 IROUT	2 IINIT	2 MIGCIS	0 IPUR	2 IPSEC	2 IEDC	2 IERSS	2 IPRED	2 IQR	1	0	tsss 1 contains tracks	TRACK	0
776	ISSSIFIB	SDB1	16 IROUT	2 IINIT	2 SDBIROS	0 IPUR	2 IPSEC	2 IEDC	2 IERSS	2 IPRED	2 IQR	1	0	tsss 1 track count	TRACK	0
777	ISSSIT2	SDB1	16 IROUT	2 IINIT	2 SDBIROS	0 IPUR	2 IEDC	2 IPSEC	2 IERSS	2 IPRED	2 IQR	1	0	tsss 1 start track numbe	TRACK	0
778	IUDCFH1	SDB1	22 KOB	3 IINIT	3 IROUT	1 SLINK	1 IPSEC	1 COMA	3 IPUR	1 IFI	0 KOF	1	0	ctr had a thread change	TRACK	0
779	IUDCFH2	SDB1	22 IPSEC	1 IUDS	3 IROUT	1 SLINK	1 IINIT	1 COMA	3 IPUR	1 IFI	0 IFIC	0 IPRED	0	thd had a thread change	TRACK	0
780	UNCONTI	SDB1	15 COMA	2 SLINK	2 IPUR	2 SDBIRO	0 KOF	2	0	0 IFI	2 IQR	3	0	unc id first file numb	TRACK	0
781	UNCONTI2	SDB1	15 COMA	2	0 IPUR	2 SDBIRO	0 KOF	0	0	0 IFI	2 IQR	1	0	unc 1 file count	TRACK	0
782	UNCONTIT	SDB1	15 SLINK	2 IPUR	2 KOF	2 IFI	2 IUD	3	0	0	0	0	0	unconti_tab	TRACK	0
783	UNRG	SDB1	30 ISUBO	0 ISUBI	0 IINIT	2	0	0	0	0	0	0	0	range as auto drop tab	SYSTEM	0
784	UNUSET1	SDB1	15 IPUR	2 COMA	2	0 IFI	2 MIP	0	0 SLINK	2 KOF	2 IQR	3	0	unu id first file numbe	TRACK	0
785	UNUSET2	SDB1	15 IUD	3 COMA	2	0 IFI	2 MIP	0 SDBIRO	0 SLINK	0 IPUR	0 KOF	2	0	unu trd file count	TRACK	0
786	XTRAXT	SDB1RO	39 COMB	0 SLINK	2	0	0	0	0	1	0	0	0		NA	0
787	SIPABL	SDB1RO	37 PSRAP	2	0	0	0	0	0	0	0	0	0		NA	0
788	SIPABU	SDB1RO	38 PSRAP	2	0	0	0	0	0	0	0	0	0		NA	0
789	SIPBUFAD	SDB1RO	40 PSRAP	2	0	0	0	0	0	0	0	0	0		NA	0
790	SIPCHI	SDB1RO	39	0	0	0	0	0	0	0	0	0	0		NA	0
791	SIPCIS	SDB1RO	41 PSRAP	2	0	0	0	0	0	0	0	0	0	s trs ctl length	NA	0
792	SIPMHRS1	SDB1RO	41 PSRAP	2	0	0	0	0	0	0	0	0	0	s trs 1 blk report max	NA	0
793	SIPMHRS2	SDB1RO	41 PSRAP	0	0	0	0	0	0	0	0	0			NA	0
794	SIPOVERI	SDB1RO	40 PSRAP	0	0	0	0	0	0	0	0	0	0		NA	0
795	SIPOVERS	SDB1RO	40	0	0	0	0	0	0	0	0	0	0		NA	0
796	SLSCLI	SDB1RO	38	0 COMA	0 SLINK	0 IINIT	0	0	0	0	0	0	0		NA	0
797	SLSCSLI	SDB1RO	38	0	0 SLINK	0	0	0	0	0	0	0	0		NA	0
798	SLSLI	SDB1RO	38 IROUT	0 COMA	2 KOF	0	0 SWABS	0 IINIT	0	0	0	0	0		NA	0

799	SLSTILE	SDBIRO	38 IPSEC	0 COMA	0 IFI	0 KOF	0 SLINE	0 SWABS	0 TINIT	0 IPUR	0	0	0			NA	0
800	SLSI2LE	SDBIRO	39 IPSEC	0 COMA	0 CRIT	0 IFI	0 KOF	0 SLINE	0 SWABS	0 IPUR	0 TINIT	0	0			NA	0
801	SLTLE	SDBIRO	39 SLINE	0 AUT	2 TROUT	2 CDR	2 IPSEC	2 TINIT	0 IFI	2 KOF	0	0 IPUR	0			NA	0
802	SMPALMI	SDBIRO	43	0	0	0	0	0	0	0	0	0	0			NA	0
803	SPEEDP1	SDBIRO	56 IPUR	2	0	0	0	0	0	0	0	0	0 R	auto_1_speed_max		SYSTEM	0
804	SPEEDP2	SDBIRO	56 IPUR	2	0	0	0	0	0	0	0	0	0 R	auto_to_min_speed		SYSTEM	0
805	SRDALMT	SDBIRO	42	2	0	0	0	0	0	0	0	0	0			NA	0
806	SYNI	SDBIRO	14 AUT	2 CATY	0 CDR	2 COMA	2 KOF	2 COMC	2 CRIT	0 DOP	0 IFD	0 KIP	0 I	synt misc		KYBD	0
807	TIMI1	SDBIRO	56 TINIT	2 IPUR	3	0	0	0	0	0	0	0	0	max_successv correl_time_interv		SYSTEM	0
808	TIMI2	SDBIRO	56	2	0 TINIT	2	0	0	0	0	0	0	0	successv correl time interval min		SYSTEM	0
809	TQE	SDBIRO	0 IPSEC	1	0 IEDCRS	0 TSUBO	0 TSUB1	0 TINIT	2 IEDC	1 IPUR	1	0	0 I	track_file_count		SYSTEM	0
810	TREXT	SDBIRO	45 SLINE	0 ICRSS	0 IPSEC	0 TINIT	0 TROUT	0 IPUR	0 IPRED	0 AUT	0 MAT	0 CATRK	0			NA	0
811	VELQI	SDBIRO	56 IPRED	2	0	0	0	0	0	0	0	0	0 R	auto_drop_velocity_max		SYSTEM	0
812	ADBPE	SDB2	37 KOF	0	0	0	0	0	0	0	0	0	0			NA	0
813	ADSTCT	SDB2	52	0 QLOUE	0 TRAD	2	0	0	0	0	0	0	0			NA	0
814	ADTRNT1	SDB2	42	0 KOF	0	0	0	0	0	0	0	0	0			NA	0
815	ADTRNT2	SDB2	42	0	0	0	0	0	0	0	0	0	0			NA	0
816	ADTRNT3	SDB2	42	0	0	0	0	0	0	0	0	0	0			NA	0
817	ADTRNT4	SDB2	42	0	0	0	0	0	0	0	0	0	0			NA	0
818	AMCT	SDB2	28 KOFB	0 PDOP	3	0	0	0	0	0	0	0	0 I	amp_funct_kbd		KBD	0
819	AMERMAT	SDB2	29 PDOP	0	0	0	0	0	0	0	0	0	0 L	amp out func		KBD	0
820	APACE	SDB2	37 KOF	0 MPEP	0	0	0	0	0	0	0	0	0 C	disp pack store disp		DISP	0
821	API	SDB2	43 COMB	2 IFI	2 KOF	0	0 MSITEQ	0	0	0	0	0	0 A	airp fix tab_ify		SYSTEM	0
822	AQLR2T	SDB2	7 COMC	2 TRAD	2	0	0	0	0	0	0	0	0 C	key two encode disp		DISP	0
823	AQLR3T	SDB2	7 COMC	2 TRAD	2	0	0	0	0	0	0	0	0 C	key three encode disp		DISP	0
824	AQLRCT	SDB2	7 COMC	2 TRAD	2	0	0	0	0	0	0	0	0 C	key one encode disp		DISP	0
825	AQLRNGT	SDB2	10 COMC	2 TRAD	2	0	0	0	0	0	0	0	0			NA	0
826	ARTEID	SDB2	38 IFI	2 KOF	0	0	0	0	0	0	0	0	0 C	source id tracon sys		SYSTEM	0
827	ATRNGD	SDB2	50 CRIT	0 MIGA	0 MIGCI	0	0	0	0	0	0	0	0			NA	0
828	AWDT	SDB2	39	0 COMC	2 TRAD	0	0	0	0	0	0	0	0 A	award table		DISP	0
829	BCONFLG	SDB2	44 SWABS	0 CRIT	0 KOF	0 MIGA	0 SLINE	0	0	0	0	0	0			NA	0
830	BCWCAN	SDB2	37 KOF	0	0	0	0	0	0	0	0	0	0			NA	0
831	BCWT	SDB2	21 DOP	0 KOFC	0 MPEB	0 MIGA	0 MIGCI	0 RCOMR	0	0	0	0	0			NA	0
832	BLACAN	SDB2	37 KOF	0 CRIT	0	0	0	0	0	0	0	0	0			NA	0
833	BRITE1T	SDB2	50 COMB	3 KOF	0 MPEB	0 TPRED	3	0	0	0	0	0	0			NA	0
834	BRITE2T	SDB2	50 TPRED	3 COMB	2 KOF	0 MPEB	0	0	0	0	0	0	0			NA	0
835	BSCFRT	SDB2	44 SWABS	0 KOF	0	0	0	0	0	0	0	0	0			NA	0
836	BSWCNT	SDB2	44 SWABS	0	0	0	0	0	0	0	0	0	0			NA	0
837	BSWFLG	SDB2	44 SWABS	0	0	0	0	0	0	0	0	0	0			NA	0
838	CACIDIX	SDB2	37 KOF	0	0	0	0	0	0	0	0	0	0			NA	0

839	CACID2X	SDB2	37 EOF	0	0	0	0	0	0	0	0	0	0			NA	0
840	CACID3X	SDB2	37 EOF	0	0	0	0	0	0	0	0	0	0			NA	0
841	CAINT	SDB2	37 EOF	0 MPEB	0	0	0	0	0	0	0	0	0			NA	0
842	CANCAI	SDB2	37 EOF	0 MPEB	0	0	0	0	0	0	0	0	0			NA	0
843	CAOF	SDB2	38 EOF	0	0	0	0	0	0	0	0	0	0			NA	0
844	CAOFTS	SDB2	37 EOF	0 MPEB	0	0	0	0	0	0	0	0	0			NA	0
845	CFGI2T	SDB2	56 EOF	0	0	0	0	0	0	0	0	0	0			NA	0
846	COFADC	SDB2	48	0 COMA	2	0	0	0	0	0	0	0	0			NA	0
847	COUNT	SDB2	12 RIP	0 CRIT	0 DOP	0 IFO	0 EOF	0	0	0 MPEB	0 MIGA	0 MIGCT	0 I	count_kbd		KBD	0
848	COUNT	SDB2	12 NOTIL	0 RCOMR	0 RRIP	0 EOF	3	0	0	0	0	0	0 I	count_kbd		KBD	0
849	CPSFLAG1	SDB2	37 EOF	0	0	0	0	0	0	0	0	0	0			NA	0
850	CRTYXT1	SDB2	5 AUT	2 IFO	0 RIP	0 RRIP	0	0	0	0	0	0	0 I	xcoord_range		DISP	0
851	CRTYXT2	SDB2	5 AUT	2 IFO	0 RIP	0 RRIP	0	0	0	0	0	0	0 I	ycoord_range		DISP	0
852	CSBT	SDB2	13 RIP	0 DOP	0 EOF	0	0	0 MPEB	0 PDMP	0 RCOMR	0	0	0 I	xybase_coord		KBD	0
853	DBCOUNT1	SDB2	40 TRAD	3 COMC	3 DOP	0 MPEB	0	0	0	0	0	0	0 I	db_alt_counter		DISP	0
854	DBCOUNT2	SDB2	40 TRAD	3 COMC	3 DOP	0 MPEB	0	0	0	0	0	0	0 I	ss_counter		DISP	0
855	DBCOUNT3	SDB2	40 TRAD	0	0	0 MPEB	0	0	0	0	0	0	0 I	tdb_counter		DISP	0
856	DBMAD2	SDB2	40 MSAM	0	0	0	0	0	0	0	0	0	0			NA	0
857	DBMADS1	SDB2	40 TRAD	3 COMC	3	0 MPEB	0	0	0	0	0	0	0			NA	0
858	DCODI	SDB2	48 EOF	0 IFI	0 MIGA	0 MIGCT	0	0	0	0	0	0	0			NA	0
859	DCONT	SDB2	3 RIDOP	0 SWABS	0 FDOP	3 TRAD	3	0	0	0	0	0	0 A	parm_tab1_disp		DISP	0
860	DCONT	SDB2	3 EOF	0	0 MPEB	0 MIGA	0 MIGCT	0 PDMP	3 QLOOK	0 RCOMP	0 RDOP	0 RRIP	0 A	parm_tab1_disp		DISP	0
861	DEGRDT	SDB2	40 TRAD	2 COMC	2 TRAD	0	0	0	0	0	0	0				NA	0
862	DFLAGT	SDB2	4 AUT	2 COMC	2 CRIT	0 DOP	0 IFO	0 RIP	0 RIPM	0 EOF	0	0	0 A	param_tab2_disp		DISP	0
863	DFLAGT	SDB2	4 TRAD	3 EOF	2	0	0	0	0	0	0	0	0 A	param_tab2_disp		DISP	0
864	DFLAGT	SDB2	4 MPEB	0 MIGA	0 MIGCT	0 PDOP	2 QLOOK	0 RCOMR	0 RRIP	0 RTDOP	0 SWABS	0 TDOP	2 A	parm_tab2_disp		DISP	0
865	DINT	SDB2	45 ?	0	0	0	0	0	0	0	0	0	0			NA	0
866	DISTRT	SDB2	2 DOP	0 IFO	0 RIP	0 RIPM	0 EOF	0	0 MPEB	0	0	0	0			NA	0
867	DMFLAG	SDB2	36 EOF	0	0	0	0	0	0	0	0	0	0 I	dmflag_temp		KBD	0
868	DPRAD	SDB2	49 IFO	0 RIP	0	0	0	0	0	0	0	0	0			NA	0
869	DSLINT	SDB2	52 TRAB	2	0	0	0	0	0	0	0	0	0 I	dslint_trad		DISP	0
870	DSLW	SDB2	36 EOF	0	0	0	0	0	0	0	0	0	0			NA	0
871	DSPRY	SDB2	37 EOF	0	0 DOP	0 RDBMD	0	0	0	0	0	0	0			NA	0
872	DTK2	SDB2	40 TRAB	2	0	0	0	0	0	0	0	0	0			NA	0
873	DTK3	SDB2	40 TRAB	2	0	0	0	0	0	0	0	0	0			NA	0
874	DTK4	SDB2	40 TRAB	2	0	0	0	0	0	0	0	0	0			NA	0
875	DTP	SDB2	39 ?	0	0	0	0	0	0	0	0	0	0 I	dead_time_psrap		NA	0
876	EIR	SDB2	36 EOF	0	0	0	0	0	0	0	0	0	0			NA	0
877	ELBDDT	SDB2	46 DOP	0	0	0	0	0	0	0	0	0	0			NA	0
878	EMRFT	SDB2	24	0 COMB	1 PDOP	0 RDBMD	0	0	0	0	0	0	0 I	em_rf_counter		DISP	0

879	ERRAT	SB02	27 POOP	0	0	0	0	0	0	0	0	0	0		NA	0
880	FIXCVT	SB02	43 COMB	2 EOF	0	0	0	0	0	0	0	0	0 A	fix_desig_srsn_tab	IFT	0
881	FPFLGT	SB02	47 NTFPY	0 CRIT	0 EOF	0 NIP	0	0	0	0	0	0	0		NA	0
882	FREEZET	SB02	50 COMA	2 EOF	0 MTGA	0 MTGCT	0 MAT	0 SLINK	0 TPSEC	0 TIMIT	0 TPUR	0	0		NA	0
883	FRTC	SB02	50 COMA	2 EOF	0 MTGA	0 MTGCT	0 SLINK	0 TPSEC	0 TIMIT	0 TPUR	0 MAT	0	0		NA	0
884	FULCON	SB02	36 EOF	0	0	0	0	0	0	0	0	0	0		NA	0
885	FUNCT	SB02	34 EOF	0 CTIP	0 IFI	0 IFO	0 KIP	0 MTGA	0 MTGCT	0 RKIP	0 SCDU	0	0		NA	0
886	GOECHK	SB02	38 EOF	0 MTGA	0 MTGCT	0	0	0	0	0	0	0	0		NA	0
887	HJT	SB02	24	0 COMB	1 POOP	0 RDBMD	0	0	0	0	0	0	0 I	hj_sa_counters	DISP	0
888	HVTCH	SB02	33 COMA	2 EOF	0	0	0	0	0	0	0	0	0 A	hj_tab_kbd	KBD	0
889	ICMPNS	SB02	3 DOP	0 IFO	0 KIP	0	0	0	0	0	0	0	0		NA	0
890	IDUBT	SB02	15 KIP	0 TROUT	0 COMA	3 TPUR	0 EOF	3	3 TRAD	2 SLINK	0 TPSEC	0 TIMIT	0	idupbt key_trk_info	DISP	0
891	INFUSE	SB02	36 EOF	0 CDR	3 CTIP	0 MTGA	0 MTGCT	0 MTP	0	0	0	0	0		NA	0
892	INIFC1	SB02	46 TPSR	2 CRIT	0 IFI	2 IFO	0 NAV	2	0 NIP	0 SLINK	0 TPSEC	2 TIMIT	2 S	ifi_data_word	SYSTEM	0
893	INIFC2	SB02	46 TIMIT	3	0	0	0	0	0	0	0	0	0 L	ifi_inhib_flg_trk	SYSTEM	0
894	KCR	SB02	38 EOF	0 TIME	0	0	0	0	0	0	0	0	0		NA	0
895	KCONT	SB02	12 KIP	0	0	0	0	0	0	0	0	0	0 A	kcont_key_data	KBD	0
896	KDUPAT	SB02	38 EOF	0	0	0	0	0	0	0	0	0			NA	0
897	KDUPBT	SB02	38 EOF	0	0	0	0	0	0	0	0	0			NA	0
898	KFORME	SB02	38 EOF	0 MTGA	0 MTGCT	0	0	0	0	0	0	0			NA	0
899	KICR	SB02	38 EOF	0	0	0	0	0	0	0	0	0			NA	0
900	KIFINH	SB02	38 EOF	0	0	0	0	0	0	0	0	0			NA	0
901	KIFR	SB02	38 EOF	0	0	0	0	0	0	0	0	0			NA	0
902	KILFR	SB02	38 EOF	0 IFI	0 MTGA	0 MTGCT	0	0	0	0	0	0			NA	0
903	KILINH	SB02	38 EOF	0	0	0	0	0	0	0	0	0			NA	0
904	KILPSR	SB02	38 EOF	0 MTGA	0 MTGCT	0	0	0	0	0	0	0			NA	0
905	KILTRK	SB02	38 EOF	0 MTGA	0 MTGCT	0	0	0	0	0	0	0			NA	0
906	KIPKY	SB02	37 EOF	0 IFO	0 KIP	0 KIPM	0 RDBMD	0	0	0	0	0			NA	0
907	KITRGR	SB02	38 EOF	0	0	0	0	0	0	0	0	0			NA	0
908	KOFKEY	SB02	37 EOF	0	0	0	0	0	0	0	0	0			NA	0
909	KOFTME	SB02	48 EOF	0	0	0	0	0	0	0	0	0			NA	0
910	KOFTMG	SB02	36 EOF	0	0	0	0	0	0	0	0	0			NA	0
911	KSLEWR	SB02	38 EOF	0 MTGA	0 MTGCT	0	0	0	0	0	0	0			NA	0
912	KYBDT	SB02	15 IPRED	0 CDR	2 EOF	3	0	0	0	0	0	0			NA	0
913	KYBDX	SB02	36 EOF	0	0	0	0	0	0	0	0	0			NA	0
914	KYBTMP	SB02	37 EOF	0	0	0	0	0	0	0	0	0			NA	0
915	LAHORD	SB02	37 EOF	0	0	0	0	0	0	0	0	0			NA	0
916	LSTRTC	SB02	49 SLINK	0 COMA	3 TPSEC	3 TIMIT	3 TPUR	3	0	0	0	0	0 R	rtc_saved value	TRACE	0
917	MBADET	SB02	51 KIP	0 IFO	0 KIPM	0	0	0	0	0	0	0	0		NA	0
918	MBADF	SB02	51 KIP	0 DOP	0 IFO	0	0	0	0	0	0	0	0		NA	0

919	MDABN	SD02	51 EIP	0 IFO	0 EIPN	0	0	0	0	0	0	0	0			NA	0
920	MDABOP	SD02	51 EIP	0 IFO	0 EIPN	0	0	0	0	0	0	0	0			NA	0
921	MDST	SD02	45 EIP	0 DOP	0 MPEB	0	0	0	0	0	0	0	0			NA	0
922	MDAD	SD02	45 EIP	0 DOP	0 MPEB	0	0	0	0	0	0	0	0			NA	0
923	MCONT	SD02	2	0	0	0	0	0	0	0	0	0	0			NA	0
924	MEMRI	SD02	26 EOF	0 PDOP	0	0	0	0	0	0	0	0	0			NA	0
925	MFTIM	SD02	51 EIP	0 DOP	0	0	0	0	0	0	0	0	0			NA	0
926	MFAD	SD02	45 DOP	0 MPEB	0	0	0	0	0	0	0	0	0			NA	0
927	MFAILF	SD02	45 DOP	0	0	0	0	0	0	0	0	0	0			NA	0
928	MFUNCT	SD02	35 EOF	0	0	0	0	0	0	0	0	0	0			NA	0
929	MFVCF	SD02	37 EOF	0	0	0	0	0	0	0	0	0	0			NA	0
930	MICNTR	SD02	46 IFO	0 EIP	0	0	0	0	0	0	0	0	0			NA	0
931	MIFDIG	SD02	45 DOP	0 MPEB	0	0	0	0	0	0	0	0	0			NA	0
932	MIMCN	SD02	2 MDM	0	0	0	0	0	0	0	0	0	0			NA	0
933	MINTBT	SD02	46 DOP	0	0	0	0	0	0	0	0	0	0			NA	0
934	MINTT	SD02	46 DOP	0	0	0	0	0	0	0	0	0	0			NA	0
935	MIPAR	SD02	51 EIP	0	0	0	0	0	0	0	0	0	0			NA	0
936	MIPF	SD02	51 EIP	0 DOP	0 IFO	0	0	0	0	0	0	0	0			NA	0
937	MIPPT	SD02	1 EIP	0 DOP	0 IFO	0	0	0	0	0	0	0	0			NA	0
938	MIPST	SD02	50 MPEB	0	0	0	0	0	0	0	0	0	0			NA	0
939	MISAVA	SD02	46	0	0	0	0	0	0	0	0	0	0			NA	0
940	MISIL	SD02	46 DOP	0	0	0	0	0	0	0	0	0	0			NA	0
941	MISTG	SD02	50 MPEB	0	0	0	0	0	0	0	0	0	0			NA	0
942	MLAAD	SD02	45 DOP	0 MPEB	0	0	0	0	0	0	0	0	0			NA	0
943	MLAD	SD02	45 DOP	0 MPEB	0	0	0	0	0	0	0	0	0			NA	0
944	MLBF	SD02	45 DOP	0 MPEB	0	0	0	0	0	0	0	0	0			NA	0
945	MLCL	SD02	45 MDBM	0 DOP	0	0	0	0	0	0	0	0	0			NA	0
946	MMINT	SD02	45 ?	0	0	0	0	0	0	0	0	0	0			NA	0
947	MPSTACE	SD02	49 DBM	0 MPEB	0	0	0	0	0	0	0	0	0			NA	0
948	MPTEM	SD02	45 DOP	0 MPEB	0	0	0	0	0	0	0	0	0			NA	0
949	MPULT	SD02	1 EIP	0 DOP	0 IFO	0	0	0	0	0	0	0	0			NA	0
950	MRDET	SD02	37 EOF	0	0	0	0	0	0	0	0	0	0			NA	0
951	MRET	SD02	45 DOP	0	0	0	0	0	0	0	0	0	0			NA	0
952	MSAMTE	SD02	52 AUT	0 COMA	2 COMB	2 COMC	2 CRIT	0 EOF	0	0 MSAM	0 TRAD	2	0	msam_inhibited		SYSTEM	0
953	MSCAMD	SD02	37 EOF	0	0	0	0	0	0	0	0	0	0			NA	0
954	MSCBMD	SD02	37 EOF	0	0	0	0	0	0	0	0	0	0			NA	0
955	MSLPX	SD02	45 DOP	0 IFO	0 EIP	0	0	0	0	0	0	0	0			NA	0
956	MSTAGT	SD02	50 DBM	0	0	0	0	0	0	0	0	0	0			NA	0
957	MSTAT	SD02	46 IFO	0 EIP	0	0	0	0	0	0	0	0	0			NA	0
958	MSWEY	SD02	37 EOF	0	0	0	0	0	0	0	0	0	0			NA	0

959	MIFLGT	SD02	47 MIFPT	0 EOF	0 MIP	0	0	0	0	0	0	0	0			NA	0
960	MIFSW	SD02	47 MIFPT	0 EOF	0 MIP	0	0	0	0	0	0	0	0			NA	0
961	MIPBSC	SD02	48 MIFPT	0 CRIT	0 EOF	0 MIP	0	0	0	0	0	0	0			NA	0
962	MIST2Y	SD02	47 MIFPT	0	0	0	0	0	0	0	0	0	0			NA	0
963	MISTP	SD02	47 MIFPT	0 EOF	0 MIP	0	0	0	0	0	0	0	0			NA	0
964	MISTY	SD02	47 MIFPT	0 MIP	0	0	0	0	0	0	0	0	0			NA	0
965	MBUFLG	SD02	50 DBM	0	0	0	0	0	0	0	0	0	0			NA	0
966	MCFGT	SD02	48	0 EOF	0 MSAM	0	0	0	0	0	0	0	0	I	mcfgt_sys_numeric	SYSTEM	0
967	MIOPQH	SD02	1 DOP	0	0	0	0	0	0	0	0	0	0			NA	0
968	MMDBMQH	SD02	1 DOP	0 IFO	0 KIP	0 KIPM	0 EOF	0	0	0	0	0	0			NA	0
969	MRDBMQH	SD02	1	0	0	0	0	0	0	0	0	0	0			NA	0
970	MSEMSQH	SD02	1	0 CRIT	0 EOF	0	0	0 MIGA	0 MIGCT	0 PDOP	2	0	0	I	msemsqh_site	SYSTEM	0
971	MUMBCWS	SD02	49 DBM	0 MPEB	0	0	0	0	0	0	0	0	0			NA	0
972	MUMDQH	SD02	1 EOFC	0 MIGA	0 MIGCT	0 PDOP	2 QLOOK	0 TDOP	2 TRAD	2	0	0	0	I	num_displays_site	SYSTEM	0
973	MUMDQH	SD02	1 AUT	2 CDR	2 COMB	2	0 CRIT	0 DMP	0 IFO	0 KIP	0 KIPM	0 KOFB	0	I	num_displays_site	SYSTEM	0
974	MUMEQH	SD02	1 TPSEC	2 TINIT	2 CRIT	0 DOP	0 EOF	2	0	0 SLTMR	0 TPUR	2 TROUT	2	I	num_keybd_site	SYSTEM	0
975	MUMTQH	SD02	0	0	0	0	0	0	0	0	0	0	0	I	num_trks_site	SYSTEM	0
976	OCDSC	SD02	45	0	0	0	0	0	0	0	0	0	0			NA	0
977	P2FLGH	SD02	36 EOF	0	0	0	0	0	0	0	0	0	0			NA	0
978	PACK1T	SD02	36 EOF	0	0	0	0	0	0	0	0	0	0			NA	0
979	PACK2T	SD02	36 EOF	0	0	0	0	0	0	0	0	0	0			NA	0
980	PAIRT	SD02	13 KIP	0 CRIT	0 DOP	0 IFO	0 EOF	3	0	0 MIGA	0 MIGCT	0 QLOOK	0	I	pairt_misc_kbd	KBD	0
981	PAIRT	SD02	13 RKIP	0	0	0	0	0	0	0	0	0	0	I	pairt_misc_kbd	KBD	0
982	PREVT	SD02	15 KIP	0 CDR	2 SLTMR	0 IFO	0 EOF	2	2	0	0	0	0	I	prevt_misc_data_kdb	KBDTEM	0
983	PRGLVL	SD02	36 EOF	0	0	0	0	0	0	0	0	0	0	S	prog_level_kbd	KBD	0
984	PRIPHT	SD02	3 DOP	0 IFO	0 KIP	0	0	0	0	0	0	0	0			NA	0
985	PURST	SD02	16 KIP	0 IFO	0 EOF	0	0 RKIP	0	0	0	0	0	0	A	trk_ball_changes_tab	KBD	0
986	QLRC2T	SD02	6 COMC	0 IFO	0 KIP	0 QLOOK	0 RKIP	0	0	0	0	0	0			NA	0
987	QLRC3T	SD02	6 COMC	0 QLOOK	0	0	0	0	0	0	0	0	0			NA	0
988	QLRC4T	SD02	6 COMC	0 CRIT	0 IFO	0 KIP	0 KOFC	0 QLOOK	0 RKIP	0 TRAD	2	0	0			NA	0
989	QLRECT	SD02	6 COMC	0	0	0	0	0	0	0	0	0	0			NA	0
990	QUIKT	SD02	13 AUT	2 COMA	2 CRIT	0 DOP	0 EOF	0	0 QLOOK	0 CTIP	0 RIOCC	0 SDB1	0			NA	0
991	QUIKT	SD02	13 SYSPAR	0 TSO	0 TTYD	0 TPUR	0 TINIT	0 TPSEC	2 TEOC	2	0	0	0			NA	0
992	RCMP	SD02	47 MIFPT	0 EOFC	0 MIP	0	0	0	0	0	0	0	0			NA	0
993	RCONT	SD02	11 EOFC	0 MPEB	0 RCOMR	0 RDOP	0 RTDOP	0	0	0	0	0	0			NA	0
994	RECYT	SD02	47 MIFPT	0 EOF	0	0 MIP	0	0	0	0	0	0	0			NA	0
995	RFILT	SD02	12 COMA	2 COMC	0 RCOMQ	0 RDOP	0	0	0	0	0	0	0			NA	0
996	RTCOUM	SD02	11 RCOMR	0 RKIP	0	0	0	0	0	0	0	0	0			NA	0
997	RTCTT1	SD02	47 MIFPT	0 MIP	0 EOF	0	0	0	0	0	0	0	0			NA	0
998	RTCTT2	SD02	47 MIFPT	0 EOFC	0 MIP	0	0	0	0	0	0	0	0			NA	0

IBM-RT-Cmod

999	RTIMET	SB02	11 RCOMR	0 RRIP	0	0	0	0	0	0	0	0	0		NA	0
1000	RTRANT	SB02	10 MPEB	0 RCOMR	0 RDOP	0 RFIP	0	0	0	0	0	0	0		NA	0
1001	RWFLT	SB02	40 MTFPY	0 EOF	0 MIP	0	0	0	0	0	0	0	0		NA	0
1002	SAT	SB02	24 PDOP	3 RCOMR	0	0	0	0	0	0	0	0	0		NA	0
1003	SAVB4W	SB02	36 EOF	0	0	0	0	0	0	0	0	0	0		NA	0
1004	SAVB5W	SB02	36 EOF	0	0	0	0	0	0	0	0	0	0 I	savb5w_temp	RBD	0
1005	SAVB6	SB02	36 EOF	0	0	0	0	0	0	0	0	0	0 I	saveb6_temp	RBD	0
1006	SAVB7W	SB02	36 EOF	0	0	0	0	0	0	0	0	0	0 I	saveb7w_temp	RBD	0
1007	SAVK	SB02	36 EOF	0	0	0 MTGA	0 MTGCT	0	0	0	0	0	0 I	savek_misc	RBD	0
1008	SCOBT	SB02	24 MPEB	0	0	0	0	0	0	0	0	0	0		NA	0
1009	SCI	SB02	29 COMC	0 CRIT	0 EOF	0 MPEB	0 TRAD	0	0	0	0	0	0		NA	0
1010	SCTI	SB02	29 COMC	0 EOF	0 MPEB	0 TRAD	0	0	0	0	0	0	0		NA	0
1011	SDABT	SB02	5 DOP	0 EOF	0	0 MPEB	0 RCOMR	0	0	0	0	0	0		NA	0
1012	SELTMT	SB02	48 MTFP	0 CRIT	0 EOF	0 MIP	0	0	0	0	0	0	0		NA	0
1013	SLEWT	SB02	36 EOF	1	0	0	0	0	0	0	0	0	0 I	slewt_misc_kbd	RBD	0
1014	SRMKY	SB02	37	0 PSRAP	2	0	0	0	0	0	0	0	0 L	keybrd_init_srap_switch_flag	RBD	0
1015	SROW	SB02	36	0	0	0	0	0	0	0	0	0	0		NA	0
1016	STNDEX	SB02	52	0 TRAD	3	0	0	0	0	0	0	0	0		NA	0
1017	STNLO	SB02	52	0	0	0	0	0	0	0	0	0	0		NA	0
1018	SUPKY	SB02	37 EOF	2	0	0	0	0	0	0	0	0	0 C	super_position_key	RBD	0
1019	SVEOFB2	SB02	36 EOF	0	0	0	0	0	0	0	0	0	5		NA	0
1020	SYMBLS	SB02	37 EOF	0	0	0	0	0	0	0	0	0	0 I	misc_temp_stor_var	RBD	0
1021	SYNF	SB02	0	0	0	0	0	0	0	0	0	0	0 C	synf_kbd	RBD	0
1022	SYSLVL	SB02	23 DOP	0 EOF	0	0	0	0	0	0	0	0	0		NA	0
1023	SYSLVT	SB02	23 DOP	0 MPEB	0 RCOMR	0	0	0	0	0	0	0	0		NA	0
1024	TABBT	SB02	14 RIPX	0 DOP	0 RDEL	0 EOF	0 MPEB	0 PDOP	0 RCOMR	0	0	0	0 A	misc_rybase_coordinate_data	RBD	0
1025	TAST	SB02	21 COMC	2 TEXEC	2 DOP	0 IFI	0 IFO	0 RIP	0 RIPM	0 EOF	1	0 MPEB	0 S	nut_sy_time_buff	SYSFEM	0
1026	TAST1	SB02	22 ?	0	0	0	0	0	0	0	0	0	0		NA	0
1027	TASTO	SB02	22 EOF	0 MTGA	0 MTGCT	0	0	0	0	0	0	0	0		NA	0
1028	TBALIT	SB02	16 RIP	0 CDR	2 IFO	0 EOF	2 MTGA	0 MTGCT	0 RRIP	0	0	0	0 A	misc_ext_trackball_data	RBD	0
1029	TBAL2T	SB02	16 RIP	0 CDR	2 IFO	0 EOF	2	0	0 MTGA	0 MTGCT	0 PDOP	0 RRIP	0 A	tdop_misc_second_trackball_data	RBD	0
1030	TBCNT	SB02	21 EOF	0 MTGA	0 MTGCT	0	0	0	0	0	0	0	0		NA	0
1031	TBLMCT	SB02	11 RCOMR	0 RTDOP	0	0	0	0	0	0	0	0	0		NA	0
1032	TBPRET	SB02	20 RIP	0 CRIT	0 DOP	0 IFO	0	0 EOF	0	0 OPEB	0 MTGA	0 MTGCT	0 S	trkball ab word	RBD	0
1033	TBT	SB02	38 RIP	0 COMA	3 COMB	0 IFI	3 SLINK	0 TEDC	3 TINIT	3 TPSEC	3 TPUR	3 EOF	3 A	tab line indicator	TRACK	0
1034	TBT2T	SB02	38 RIP	0 COMB	0 SLINK	0 TEDC	3 TINIT	3 TPSEC	3 TPUR	3 EOF	3 IFI	3	0 A	tab lin2 indicator	TRACK	0
1035	TBT3T	SB02	38 RIP	0 SLINK	0 TEDC	3 TINIT	3 TPSEC	3 TPUR	3 EOF	3 IFI	3	0	0 A	tab lin3 indicator	TRACK	0
1036	TBT4T	SB02	38 RIP	0 COMB	0 SLINK	0 TEDC	3 TINIT	3 TPSEC	3 TPUR	3 IFI	3 EOF	3	0 A	tab lin4 indicator	TRACK	0
1037	TDOPT	SB02	52 TDOP	3	0	0	0	0	0	0	0	0	0 I	dis_count_disp	DISP	0
1038	TEMP	SB02	36	0 BRATS	0 BOFA	0 EOF	0	0	0 MTGCT	0 MTGA	0	0 SCDU	0 I	temp misc var	RBD	0

1039	TEMRFT	SDB2	24	0	0 COMB	0 PDVP	0	0	0	0	0	0	0			NA	0
1040	TFLAG	SDB2	48 SCTME	3 COMA	2 TEXEC	0	0	0	0	0	0	0	0	L	scrch_pad_alt_flag	SYSTEM	0
1041	TFRIC	SDB2	50 MAT	0 COMA	2 EOF	0 MIGA	0 MIGCT	0 SLIME	0 IPSEC	0 TIMIT	0 TPUR	0	0			NA	0
1042	THJT	SDB2	24 DISPLAY	0	0 COMB	2 PDUP	0	0	0	0	0	0	0			NA	0
1043	TERCXT	SDB2	6	0 CDR	2 COMC	3 CRIT	0 IFD	0 EIF	0 MPED	0 ALOOK	0 AKIP	0 TRAD	3	I	tkrcxt_misc_disp	DISP	0
1044	TMDAM1	SDB2	49	0 COMA	2 EOF	2	0	0 MAT	2 MIP	0 PDOP	0 IFI	2	0	I	t_o_d_minutes	SYSTEM	0
1045	TMDAST	SDB2	49	0	0	0	0	0	0	0	0	0	0	I	t_o_d_seconds	SYSTEM	0
1046	TMDYRTC	SDB2	49 SLIME	0 IPSEC	3 TIMIT	3 TPUR	3 MAT	3	0	0	0	0	0	R	tmdyrtc_temp_sys_roll	SYSTEM	0
1047	TMGACT	SDB2	50 SLIME	0 COMA	2 MIGA	0 MIGCT	0 PDOP	0 IPSEC	0 TIMIT	0 TPUR	0 MAT	0	0			NA	0
1048	TRN1T	SDB2	42	0 EOF	2 MIGA	0 MIGCT	0	0	0	0	0	0	0	A	sen_1_coord_transl_tab	RBD	0
1049	TRN2T	SDB2	42	0 EOF	2	0	0	0	0	0	0	0	0	A	sen_2_coord_transl_tab	RBD	0
1050	TRN3T	SDB2	42	0 EOF	2	0	0	0	0	0	0	0	0	A	sen_3_coord_transl_tab	RBD	0
1051	TRN4T	SDB2	42	0 EOF	2	0	0	0	0	0	0	0	0	A	sen_4_coord_transl_tab	RBD	0
1052	TS1T	SDB2	29 COMA	2 EOF	0 MIP	0	0	0	0	0	0	0	0			NA	0
1053	TS2T	SDB2	29 COMA	2 EOF	0 MIP	0	0	0	0	0	0	0	0			NA	0
1054	TSAT	SDB2	24	0 PDOP	3	0	0	0	0	0	0	0	0			NA	0
1055	TST	SDB2	29 COMA	2 EOF	0 MIP	0	0	0	0	0	0	0	0			NA	0
1056	TSTRT	SDB2	37 MIGA	0 MIGCT	0	0	0	0	0	0	0	0	0			NA	0
1057	TTAST	SDB2	21	0 MIGA	0 MIGCT	0 PDOP	3	0	0	0	0	0	0			NA	0
1058	TTNDAMI	SDB2	49 TPUR	0 COMA	2 EOF	0 MAT	2 RDOP	0 SLIME	2	0	0	0	0			NA	0
1059	TTNDAST	SDB2	49	0 MIGA	0 MIGCT	0 RDOP	0	0	0	0	0	0	0			NA	0
1060	TTTSMD	SDB2	37 EOFB	0	0	0	0	0	0	0	0	0	0	L	recon_inhibit_flag	RBD	0
1061	TYF	SDB2	40 COMA	0	0	0	0	0	0	0	0	0	0			NA	0
1062	TYI	SDB2	39 COMA	2	0	0	0	0	0	0	0	0	0			NA	0
1063	TYPIT	SDB2	7 AUT	2 INFO	0 EIP	0 EOF	0 MIGA	0 MIGCT	0 REIP	0	0	0	0	S	last_corct_type	RBD	0
1064	TZULUL	SDB2	49 SLIME	0 COMA	3 EOF	0 IPSEC	0 TIMIT	0 TPUR	0 MAT	0	0	0	0			NA	0
1065	UAFLT	SDB2	5	0	0 EOF	0 TRAD	2	0	0	0	0	0	0	I	alt_filter_display_up_low_limits	DISP	0
1066	VIAIT	SDB2	31	0 COMA	2 EOF	2	0	0	0	0	0	0	0	A	ifr_vf_code_tab	SYSTEM	0
1067	VICADT	SDB2	32 SLIME	0 COMA	2 EOF	0 TEDC	2 TIMIT	0 TPUR	0 IPSEC	2	0	0	0			NA	0
1068	VICDT	SDB2	31 EOF	2 COMA	2 EOF	0 SLIME	0 TEDC	2 TIMIT	0 TPUR	0 TPSEC	2	0	0	A	abc_table	SYSTEM	0
1069	VICIXT	SDB2	32	0 EOF	2	0	0	0	0	0	0	0	0	A	ifr_vf_ins_tab	SYSTEM	0
1070	VICWT	SDB2	33	0 EOF	0	0	0	0	0	0	0	0	0	A	ifr_vf_word_tab	SYSTEM	0
1071	VILCRT	SDB2	32 TIMIT	2 TPUR	2 IPSEC	2	0	0	0	0	0	0	0	L	ifr_v_code_req	TRACE	0
1072	VITCRT	SDB2	32	0	0	0	0	0	0	0	0	0	0			NA	0
1073	ZULUL	SDB2	49 SLIME	0 MAT	3 CRIT	0 EOF	3 TEDC	2 TIMIT	3 IPSEC	3 TPUR	3 TPRED	2 IFI	3	I	diff_btw_rtc_time_of_day	SYSTEM	0
1074	WRAPTIME	SDBIRO	329 PSRAP	2	0	0	0	0	0	0	0	0	0	I	wrap_time	NA	0
1075	SIPSTLQ	IT	0 PSRAP	.	0	0	0	0	0	0	0	0	0			NA	0
1076	SIPTOSFQ	IT	0 PSRAP	2	0	0	0	0	0	0	0	v	0	R	sensr_fail_msg_outtime	NA	0
1077	VAQ	TRAM	0 TPUR	2 SAFY	0 COMA	2 COMB	0 RIZCC	0 TCRSS	2 TIMIT	2 TRAD	2 TSUBO	0 TSUBI	0	I	bn_code_min_value	SYSTEM	0
1078	AAMC	TMP	5 COMA	2 IFI	1 EOF	1 MIP	0 TMP	0	0	0	0	0	0	I	aamc_temp_trk	TRACE	0

1079	AAIJU	TMP	4 COMA	2 IFI	1 EOF	3	0 MIP	0 TMP	0	0	0	0	0 E	aaltu_temp_trk	IPACE	0
1080	ACTYPM	TMP	4 COMA	2 IFI	1 EOF	1 MIP	0 TMP	0	0	0	0	0	0 S	actypm_temp_trk	IPACE	0
1081	ADFLC	TMP	4 COMA	3 IFI	3 EOF	3	0 TMP	0	0	0	0	0	0 I	adflc_temp_trk	IRACE	0
1082	ADTRK	TMP	6 COMC	3 TMP	0 TRAD	3	0	0	0	0	0	0	0 I	adtrk_temp_trk	FBD	0
1083	ARCIDC	TMP	4 FINIT	3 IPUR	3 IFI	3 EOF	3	0 MAT	1 MIP	0 TMP	0 SLINK	0 IPSEC	3 I	arcidc_temp_trk	NA	0
1084	BEACNC	TMP	4 COMA	3 IFI	3 EOF	3	0	0 MIP	0 TMP	0	0	0	0 I	beacnc_temp_trk	IRACE	0
1085	BIND	TMP	6 TMP	0 TRAD	3	0	0	0	0	0	0	0	0 L	bind_temp_trk	SYSTEM	0
1086	CHGFLG	TMP	5 COMC	3 TMP	0 TRAD	3	0	0	0	0	0	0	0 L	chgflg_temp_trk	DISP	0
1087	CLDTRK	TMP	5 TMP	0 TRAD	3	0	0	0	0	0	0	0	0 I	cldtrk_temp_trk	DISP	0
1088	CONTRC	TMP	5 COMA	3 IFI	1 EOF	1	0	0 MIP	0 TMP	0	0	0	0 I	contrc_temp_trk	IRACE	0
1089	DBCNT	TMP	5	0 DMP	0 TMP	0 TRAD	0	0	0	0	0	0	0		NA	0
1090	DSPCLR	TMP	5 TMP	0 TRAD	3	0	0	0	0	0	0	0	0 I	dspclr_temp_trk	DISP	0
1091	DTCHGFLG	TMP	6 TMP	0 TRAD	1	0	0	0	0	0	0	0	0 L	all_chg_flag_trk	DISP	0
1092	DUPBCF	TMP	5 TMP	0	0	0	0	0	0	0	0	0	0		NA	0
1093	DUPDUC	TMP	4 IPUR	3 IFI	2 EOF	2	0	0 MAT	2 TMP	0 SLINK	0 IPSEC	3 FINIT	3 I	dupduc_temp_trk	NA	0
1094	DUPISD	TMP	4 COMA	3 TMP	0 SLINK	0 IPSEC	3 FINIT	3 IPUR	1	0	0	0	0 I	dupisd_temp_trk	IRACE	0
1095	ECIDIC	TMP	5 COMA	0 IFI	3 EOF	3 MIP	0 TMP	0	0	0	0	0	0 I	ecidc_temp_trk	IRACE	0
1096	ETAC	TMP	5 COMA	3 COMB	1 IFI	3 EOF	1	0	0 MIP	0 TMP	0	0	0 I	etac_temp_trk	IRACE	0
1097	FIXC	TMP	5 COMA	3 IFI	3 EOF	3	0 MIP	0 TMP	0	0	0	0	0 I	fixc_temp_trk	IRACE	0
1098	JNIT	TMP	4 COMA	3 MAT	3 TMP	0	0	0	0	0	0	0	0 I	init_temp_trk	IRACE	0
1099	LADTRK	TMP	5	0 TRAD	3	0	0	0	0	0	0	0	0 I	ldtrk_temp_trk	DISP	0
1100	MASBYC	TMP	4 COMA	3 IFI	1 EOF	0 MAT	1 SLINK	0 IPSEC	3 FINIT	3 IPUR	3	0	0 I	masbyc_temp_trk	NA	0
1101	MSWTMP	TMP	5 COMB	0	0	0	0	0	0	0	0	0	0		NA	0
1102	PACRAD	TMP	5 COMC	2 DOF	0	0	0	0	0	0	0	0	0		NA	0
1103	PAKET	TMP	6 TRAD	3	0	0	0	0	0	0	0	0	0 I	paket_temp_trk	IRACE	0
1104	PASBI	TMP	6 COMC	3	0	0	0	0	0	0	0	0	0 I	pasbi_temp_trk	IRACE	0
1105	PASTME	TMP	6	0	0	0	0	0	0	0	0	0	0		NA	0
1106	PFTMP	TMP	5 COMA	3	0	0	0	0	0	0	0	0	0 S	pftmp_temp_trk	IRACE	0
1107	PSCPAR	TMP	5 MPEB	0	0	0	0	0	0	0	0	0	0		NA	0
1108	PSCTMP	TMP	5 MPEB	0	0	0	0	0	0	0	0	0	0		NA	0
1109	RDELTZ	TMP	6 MSAM	0 CDR	2	0	0	0	0	0	0	0	0		NA	0
1110	SAVB2	TMP	5 DOP	CIPM	0	0	0	0	0	0	0	0	0 I	savb2_temp_trk	IRACE	0
1111	SAVEID	TMP	5 COMA	3 SLINK	0 IPSEC	3 FINIT	3 IPUR	3	0	0	0	0	0 I	saveid_temp	IRACE	0
1112	SCPDQ	TMP	5	0	0	0	0	0	0	0	0	0	0		NA	0
1113	SCPDW	TMP	5 EOF	1	0	0	0	0	0	0	0	0	0 S	scratch_pad	IRACE	0
1114	SCPWW	TMP	5 EOF	1	0	0	0	0	0	0	0	0	0 S	wait	IRACE	0
1115	TCTBT	TMP	5	0 COMA	3 COMB	0	0	0	0	0	0	0	0		NA	0
1116	TEMTR1	TMP	5	0 TRAD	3	0	0	0	0	0	0	0	0 I	temtr1_temp	DISP	0
1117	TEMTR2	TMP	5	0 COMC	3 TRAD	3	0	0	0	0	0	0	0 I	temtr2_temp_trk	DISP	0
1118	TEMTR3	TMP	5	0 TRAD	3	0	0	0	0	0	0	0	0 I	temtr3_temp_trk	DISP	0

1119	TEMTRK	TMP	5	0 TRAD	3	0	0	0	0	0	0	0	0 I	teatrk_temp	DISP	0
1120	TFLG	TMP	5	0 COMA	3 COMB	0	0	0	0	0	0	0	0 I	tflg_temp	TRACK	0
1121	TRADB2	TMP	6	0	0	0	0	0	0	0	0	0	0		NA	0
1122	TRADB3	TMP	6	0 COMC	3 TRAD	3	0	0	0	0	0	0	0 I	tradb3_temp	DISP	0
1123	TRADB5	TMP	6	0	0 TRAD	0	0	0	0	0	0	0	0 I	tradb5_temp	DISP	0
1124	TRADCTS	TMP	6	0	0	0	0	0	0	0	0	0	0		NA	0
1125	TRADDLS	TMP	5	0	0	0	0	0	0	0	0	0	0		NA	0
1126	TRADSI	TMP	5	0	0	0	0	0	0	0	0	0	0		NA	0
1127	TRADSLE	TMP	5 COMMON	0 COMC	3 TRAD	3	0	0	0	0	0	0	0 S	tradsle_temp	TRACK	0
1128	TREC	TMP	5	0 COMA	3	0	0	0	0	0	0	0	0 I	tred_temp	TRACK	0
1129	TRKALT	TMP	5	0 COMC	3 TRAD	3	0	0	0	0	0	0	0 I	trkalt_temp	DISP	0
1130	TRKCLR	TMP	5	0 TRAD	3	0	0	0	0	0	0	0	0 I	trkclr_temp	DISP	0
1131	TRKFAA	TMP	5	0 TRAD	3	0	0	0	0	0	0	0	0 I	trkfaa_temp_trk	DISP	0
1132	TRKLCA	TMP	5	0 TRAD	3	0	0	0	0	0	0	0	0 I	trklca_temp_trk	DISP	0
1133	TRKRBC	TMP	5	0 COMC	1 TRAD	3	0	0	0	0	0	0	0 I	trkrbc_temp_trk	DISP	0
1134	TRTNDX	TMP	5	0 COMC	3 TRAD	3	0	0	0	0	0	0	0 I	trtndx_temp	TRACK	0
1135	XDELTZ	TMP	6 MSAW	0 CDR	2	0	0	0	0	0	0	0	0		NA	0
1136	YDELZ	TMP	6 MSAW	0 CDR	0	0	0	0	0	0	0	0	0		NA	0
1137	TRSIT	TRS	28 TEXEC	1	0 TCRSS	2 TPSEC	2	0	0	0	0	0	0 A	trs_trk	TRACK	0
1138	TRSIT1	TRS	28 TEXEC	1 TEDC	2 TCRSS	2 TPSEC	2 TINIT	2 TPUR	2	0	0	0	0 R	trs_azimuth	TRACK	0
1139	TRSIT10	TRS	29 TEXEC	1 TEDC	2 TCRSS	2 TPSEC	2 TINIT	2 TPUR	2	0	0	0	0 S	trs_3a_validity_code	TRACK	0
1140	TRSIT11	TRS	29 TEXEC	1 TEDC	2 TCRSS	2 TPSEC	2 TINIT	2 TPUR	2	0	0	0	0 I	trs_beacon_code	TRACK	0
1141	TRSIT12	TRS	29 TEXEC	1	0 TCRSS	2 TPSEC	2 TINIT	2 TPUR	2	0	0	0	0 L	trs_strong	TRACK	0
1142	TRSIT13	TRS	29 TEXEC	1 TEDC	2 TCRSS	2 TPSEC	2 TINIT	2	0	0	0	0	0 I	trs_mode_c_validity_code	TRACK	0
1143	TRSIT14	TRS	29 TEXEC	1	0 TCRSS	2 TPSEC	2 TINIT	2 TPUR	2	0	0	0	0 I	trs_alt_mode_c	TRACK	0
1144	TRSIT15	TRS	29 TEXEC	1 TEDC	2 TCRSS	2 TPSEC	2 TINIT	2 TPUR	2	0	0	0	0 R	trs_ram_2	TRACK	0
1145	TRSIT2	TRS	29 TEXEC	1 TEDC	2 TCRSS	2 TPSEC	2 TINIT	2 TPUR	2	0	0	0	0 L	trs_radar_reinforced	TRACK	0
1146	TRSIT3	TRS	29 TEXEC	1	0 TCRSS	2 TPSEC	2 TINIT	2 TPUR	2	0	0	0	0 I	trs_quality_code	TRACK	0
1147	TRSIT4	TRS	29 TEXEC	1	0 TCRSS	2 TPSEC	1 TINIT	3 TPUR	2	0	0	0	0 L	trs_tpur_use_is_inhibited	TRACK	0
1148	TRSIT5	TRS	29 TEXEC	1	0	0 TPSEC	2 TINIT	2 TPUR	2	0	0	0	0 L	trs_emergency_is_in_effect	TRACK	0
1149	TRSIT6	TRS	29 TEXEC	1 TEDC	2 TCRSS	2 TPSEC	2 TINIT	2 TPUR	2	0	0	0	0 L	trs_training_target_gen	TRACK	0
1150	TRSIT7	TRS	29 TEXEC	1	0	0 TPSEC	2 TINIT	2	0	0	0	0	0 L	trs_ifr_mode	TRACK	0
1151	TRSIT8	TRS	29 TEXEC	1 TEDC	3 TCRSS	2 TPSEC	1 TINIT	3 TPUR	3	0	0	0	0 L	trs_unused	TRACK	0
1152	TRSIT9	TRS	29 TEXEC	1	0 TCRSS	2 TPSEC	2 TINIT	2 TPUR	2	0	0	0	0 L	trs_special_position	TRACK	0

Word	DATANAME	DESCRIPT
1	B[illegible]	Beacon initiation table
2	B[illegible]	Beacon unused report azimuth (B[illegible] words)
3	B[illegible]	Beacon unused report Va [illegible] (B[illegible] words)
4	B[illegible]	Beacon unused report beacon code (B[illegible] words)
5	B[illegible]	Beacon unused report Vr [illegible] (B[illegible] words)
6	B[illegible]	Beacon unused report altitude (B[illegible] words)
7	B[illegible]	Beacon unused report range (B[illegible] words)
8	B[illegible]	Beacon unused report y coordinate (B[illegible] words)
9	B[illegible]	Beacon unused report x coordinate (B[illegible] words)
10	B[illegible]	Beacon unused report velocity along y coordinate (B[illegible])
11	B[illegible]	Beacon unused report velocity along x coordinate (B[illegible] words)
12	B[illegible]	Beacon unused report sliding window (B[illegible] words)
13	B[illegible]	Beacon unused report firmness value (B[illegible] words)
14	B[illegible]	Beacon unused report time of last correlation (B[illegible] words)
15	ABEAT1	Last correlation flag
16	ABEAT1	Last correlation flag
17	ABEAT1	Last correlation flag
18	ABEAT2	Initial correlation process flag
19	ABEAT3	Assigned beacon code
20	ABEAT4	Zero
21	ABEAT5	Defines status of beacon code
22	ACTYPT1	Aircraft type
23	ACTYPT2	
24	ALT1	Reported altitude
25	ALT1	Reported altitude
26	ALT2	Console typewriter printout request flag
27	ALT31	Last scan altitude missing & current scan altitude valid flag
28	ALT32	A flag indicating that a track's altitude is valid for the current scan
29	ALT4	Assigned beacon code checked flag
30	ALT51	Current scan altitude missing
31	ALT52	Track's last scan altitude was greater than the violation altitude
32	ALT6	Track's warn count
33	ALT7	General terrain warning in effect flag
34	ALT8	Approach warning in effect flag
35	ALT9	MSAW inhibited flag
36	ASOCT1	Track no. parent or deviation trial: track number
37	ASOCT1	Track no. of parent or deviation trial: track number
38	ASOCT1	Track no. parent or deviation trial: track number

39	ASOCI2	Track no. parent or deviation trial: deviation trial track indicator
40	ASOCI3	Track no. parent or deviation trial: SPI indicator (squawking ID)
41	ASOCI4	Track no. parent or deviation trial: emergency/radio failure indicator
42	ASOCI5	Track no. parent or deviation trial: firmness value
43	ASOCI6	Track no. parent or deviation trial: interfacility handoff indicator, no handoffs?
44	ASOCI7	Track no. parent or deviation trial: straightline track class code
45	ASOCI8	Track no. parent or deviation trial: flag to inhibit deviation trial tracks turn correl processing
46	ASOCI9	Track no. parent or deviation trial: track predict indicator
47	CATB	CURRENT POSITIONAL AND SINGLE SYMBOL DATA IN B WORD FORMAT
48	CATB	Current positional and single symbol data in B word format
49	CATB	Current positional and single symbol data in B word format
50	CATB1	x y positional data in b word format in old sys
51	CATC11	For limited data blocks: four digits of reported beacon code or pad characters
52	CATC11	For limited data blocks: four digits of reported beacon code or pad characters
53	CATC12	For full data blocks: Four M.S. characters of the ACID or pad characters or spaces, for all in past
54	CATC12	For full data blocks: Four M.S. characters of the ACID or pad characters or spaces, all in pascal
55	CATC21	For limited data blocks: contains "ID" or pad characters
56	CATC21	For limited data blocks: contains "ID" or pad characters
57	CATC22	For full data blocks: The three L.S. ACID characters, ALL IN CATC21 IN NEW SYS
58	CATC31	For limited data blocks: three altitude characters, "CST", "EDR", or 3 spaces
59	CATC32	For full data blocks: handoff receiver position symbol, "#", second L.S. digit of rep. beac. code
60	CATC41	For limited data blocks: two speed characters or pad characters
61	CATC42	For full data blocks: second L.S. character of aircraft type
62	CFLGI1	Radar subsystem with which the track is currently associated
63	CFLGI1	Radar subsystem with which the track is currently associated
64	CFLGI1	Radar subsystem with which the track is currently associated
65	CFLGI1	Radar subsystem with which the track is currently associated
66	CFLGI10	Consecutive times coasted counter
67	CFLGI11	Arrival/departure status indicator
68	CFLGI12	Consecutive successful scans of code match counter (for store/coast track with discrete ABC)
69	CFLGI13	Second pass flag
70	CFLGI14	Flight plan received flag
71	CFLGI15	Auto acquisition disallowed flag
72	CFLGI16	Outside of max range of radar flag
73	CFLGI2	Current CIS thread disposition flag
74	CFLGI3	No. of non-space characters in ACID
75	CFLGI4	Disposition of this files FP indicator
76	CFLGI5	Auto-acquisition inhibit flag
77	CFLGI6	Heavy jet flag
78	CFLGI7	Mode C status during track initiation flag

79	CFCG18	Applicable code detection display flag
80	CFCG19	Radar flight plan, ?? RDR ONLY TRAK??
81	CISI1	CIS table , contains track information for each track ; ?? = system and I = CIS key for in the system
82	CISS11	three character scratch pad data for track
83	CISS12	Three character scratch pad data for track
84	CISS12	Misc. shared counter or line identifier for track or blinking display counter
85	CISS13	Inhibit reset indicator flag
86	CISS14	Flashing report beacon code flag
87	CISS15	Track displaying a blinking RDR flag
88	CISS16	Interfacility handoff action flag
89	CISS17	Track auto-acquired previously flag
90	CISS18	Assigned altitude flag
91	CIST1	For associated track controlling position, position number
92	CIST1	For associated track: track controlling position, position number
93	CIST1	For associated track: track controlling position, position number
94	CIST1	For associated track: track controlling position, position number
95	CIST1	For associated track: track controlling position, position number
96	CIST2	For associated track: handoff status
97	CIST3	For associated track: type & status of track file (UI)
98	CIST3	For associated track: type & status of track file (UI)
99	CIST4	For associated track: type & status of track file (A)
100	CIST4	For associated track: type & status of track file (A)
101	CIST5	For associated track: type & status of track file (TP)
102	CIST5	For associated track: type & status of track file (TP)
103	CIST6	For associated track: radar subsystem with which the track is associated
104	CIST7	For associated track: enroute time field
105	CIST8	For associated track: enroute status
106	CIST9	For associated track: test & set flag for this track file
107	DALT1	Altitude velocity
108	DALT2	Altitude acceleration
109	FILT1	Associate track designator as full data block (displays 1 - 30)
110	FILT2	Associate track designator as full data block (displays 31 - 60)
111	LGCT1	Unassociated tabular tracks: TI received flag
112	LGCT1	Unassociated tabular list track: TI received flag
113	LGCT1	Unassociated tabular tracks: TI received flag
114	LGCT10	Unassociated tabular tracks: active track in old status flag
115	LGCT10	Unassociated tabular tracks: active track in old status flag
116	LGCT10	Unassociated tabular tracks: active track in old status flag
117	LGCT11	Unassociated tabular tracks: output display status indicator
118	LGCT11	Unassociated tabular tracks: output display status indicator

119	LGCT11	Unassociated tabular tracks: output display status indicator
120	LGCT12	Unassociated tabular tracks: PAUS FIDB/FIDB reference receive 1 flag
121	LGCT12	Unassociated tabular tracks: PAUS FIDB/FIDB reference receive 2 flag
122	LGCT12	Unassociated tabular tracks: PAUS FIDB/FIDB reference receive 3 flag
123	LGCT13	Active tracks: length of time aircraft type is displayed counter
124	LGCT13	Active tracks: length of time aircraft type is displayed counter
125	LGCT13	Active tracks: length of time aircraft type is displayed counter
126	LGCT14	Active tracks: aircraft type display inhibited flag
127	LGCT14	Active tracks: aircraft type display inhibited flag
128	LGCT14	Active tracks: aircraft type display inhibited flag
129	LGCT15	Active tracks: eligible to have blinking IF displayed flag
130	LGCT15	Active tracks: eligible to have blinking IF displayed flag
131	LGCT15	Active tracks: eligible to have blinking IF displayed flag
132	LGCT16	Active tracks: forced control change flag
133	LGCT16	Active tracks: forced control change flag
134	LGCT16	Active tracks: forced control change flag
135	LGCT17	Suspend active status flag
136	LGCT17	Suspend active status flag
137	LGCT17	Suspend active status flag
138	LGCT18	Active tracks: speed
139	LGCT18	Active tracks: speed
140	LGCT18	Active tracks: speed
141	LGCT19	Active tracks: tabular coast countdown
142	LGCT19	Active tracks: tabular coast countdown
143	LGCT19	Active tracks: tabular coast countdown
144	LGCT2	Unassociated tabular tracks: DUP ID check by MAT flag
145	LGCT2	Unassociated tabular tracks: DUP ID check by MAT flag
146	LGCT2	Unassociated tabular tracks: DUP ID check by MAT flag
147	LGCT20	Flight plans: flight plan ETA/PTD
148	LGCT20	Flight plans: flight plan ETA/PTD
149	LGCT20	Flight plans: flight plan ETA/PTD
150	LGCT3	Unassociated tabular tracks: special symbology for tabular suspend track flag
151	LGCT3	Unassociated tabular tracks: special symbology for tabular suspend track flag
152	LGCT3	Unassociated tabular tracks: special symbology for tabular suspend track flag
153	LGCT4	Unassociated tabular tracks: track position changed flag
154	LGCT4	Unassociated tabular tracks: track position changed flag
155	LGCT4	Unassociated tabular tracks: track position changed flag
156	LGCT5	Unassociated tabular tracks: replied track drop inhibited flag
157	LGCT5	Unassociated tabular tracks: replied track drop inhibited flag
158	LGCT5	Unassociated tabular tracks: replied track drop inhibited flag

159	LGC16	Unassociated tabular tracks: HERC correlation inhibited flag
160	LGC16	Unassociated tabular tracks: HERC correlation inhibited flag
161	LGC16	Unassociated tabular tracks: HERC correlation inhibited flag
162	LGC17	Unassociated tabular tracks: HERC correlation flag
163	LGC17	Unassociated tabular tracks: HERC correlation flag
164	LGC17	Unassociated tabular tracks: HERC correlation flag
165	LGC18	Unassociated tabular tracks: ACID change flag
166	LGC18	Unassociated tabular tracks: ACID change flag
167	LGC18	Unassociated tabular tracks: ACID change flag
168	LGC19	Unassociated tabular tracks: IHOOI process this scan flag
169	LGC19	Unassociated tabular tracks: IHOOI process this scan flag
170	LGC19	Unassociated tabular tracks: IHOOI process this scan flag
171	LNK1T1	Track number of link in sensor 1
172	LNK1T2	Time to monitor link in sensor 1 flag
173	LNK1T3	Pseudo link in sensor 1 flag
174	LNK1T4	No link exists in sensor 1 flag
175	LNK1T5	Track number of link in sensor 2
176	LNK1T6	Time to monitor link in sensor 2 flag
177	LNK1T7	Pseudo link exists in sensor 2 flag
178	LNK1T8	No link exists in sensor 2 flag
179	LNK2T1	Track number of link in sensor 3
180	LNK2T2	Time to monitor link in sensor 3 flag
181	LNK2T3	Pseudo link in sensor 3 flag
182	LNK2T4	No link exists in sensor 3 flag
183	LNK2T5	Track number of link in sensor 4
184	LNK2T6	Time to monitor link in sensor 4 flag
185	LNK2T7	Pseudo link in sensor 4 flag
186	LNK2T8	Flag indicating no link exists in sensor 4
187	LNKT1	Sensor 1 link fail count
188	LNKT2	Sensor 2 link fail count
189	LNKT3	Sensor 3 link fail count
190	LNKT4	Sensor 4 link fail count
191	LNKT5	DBM address of data for tabular tracks
192	LNKT6	Tabular data repacked since last output to DBM flag
193	PALT1	Predicted altitude
194	PALT2	Altitude tracking firmness value
195	PALT3	Altitude history sliding window
196	PALT4	Valid altitude flag
197	PDBIT1	For associated tracks: least significant digit of flashing RBC
198	PDBIT2	For associated tracks: three altitude characters

```
199 PDB211  For associated tracks: suspended track controller symbol
200 PDB212  For unassociated tracks: pad characters
201 RBEAI1  Altitude of latest report with which this track correlated
202 RBEAI1  Altitude of latest report with which this track correlated
203 RBEAI1  Altitude of latest report with which this track correlated
204 RBEAI2  Altitude validity code
205 RBEAI2  Altitude validity code
206 RBEAI2  Altitude validity code
207 RBEAI3  Altitude this scan flag
208 RBEAI3  Altitude this scan flag
209 RBEAI3  Altitude this scan flag
210 RBEAI3  Altitude this scan flag
211 RBEAI3  Altitude this scan flag
212 RBEAI4  Reported beacon code for this scan for this track
213 RBEAI4  Reported beacon code for this scan for this track
214 RBEAI4  Reported beacon code for this scan for this track
215 RBEAI5  Reported beacon code validity for this scan for this track
216 RBEAI5  Reported beacon code validity code for this scan for this track
217 RBEAI5  Reported beacon code validity code for this scan for this track
218 RBEAI6  Reported beacon code this scan flag
219 RBEAI6  Reported beacon code this scan flag
220 RBEAI6  Reported beacon code this scan flag
221 RECRTI0  Track file just initiated into system flag
222 RECRTI0  Track file just initiated into system flag
223 RECRTI0  Track file just initiated into system flag
224 RECRTIA  Controller number (Prime, handoff receiver, former), split into 2 variables.
225 RECRTIA  Controller number (Prime, handoff receiver, former),split into 2 variables.
226 RECRTIA  Controller number (Prime, handoff receiver, former), split into 2 variables.
227 RECRTIB
228 RECRTIB  split one 2 valued parameter into 2 separate variables
229 RECRTIC  prime controller number based on flight plan data if no cfg keyboard entry had been made
230 RECRI2  Index to ICIDT table
231 RECRI2
232 RECRI2
233 RECRI3
234 RECRI3  Counter for number of successive successful correlations for this track
235 RECRI3  counter for number of successive successful correlations for this track
236 RECRI4
237 RECRI4   Not needed since the same counter may be used for parent trial and initial track correlation counts
238 RECRI4
```

```
239 RECRT5
240 RECRT5  Auto acquisition allowed in A sector hold area flag
241 RECRT5
242 RECRT5  Select mode C altitude in FDB inhibited flag
243 RECRT6
244 RECRT6
245 RECRT7  Speed changed flag
246 RECRT7  speed change flag
247 RECRT7  speed changed flag
248 RECRT8  altitude changed flag
249 RECRT8  Altitude changed flag
250 RECRT8  altitude changed flag
251 RECRT9
252 RECRT9  ARTS track flag
253 RECRT9
254 RECRTIC
255 RGAZT1  Predicted track: range
256 RGAZT1
257 RGAZT2
258 RGAZT2  Predicted track: azimuth
259 SALT1   smoothed alt
260 SALT1   Smoothed altitude
261 SALT2    Aural alarm selected flag
262 SALT2
263 SALT3
264 SALT3   Flashing LA/CA indicator
265 SALT4   Display inhibited flag
266 SALT4
267 SLIDT1  Leader direction change request flag
268 SLIDT2  Requested leader direction
269 SLIDT3  CIS thread change request flag
270 SLIDT4
271 SLIDT4  No. of consecutive beacon reports correlated to a radar only track
272 SLIDT5  Delayed auto-terminate flag
273 SLIDT6  Delete from sector thread flag
274 SLIDT7  Live/training flag  (live_mode : true)
275 SLIDT8  Beacon target correlation flag
276 SLIDT9  Radar target correlation flag
277 TADIT   For tabular tracks; three M.S. ACID characters
278 TAD3T1  For suspend tracks; three characters of altitude
```

```
279 TAB3I2   For tabular coast tracks: ????????
280 TAB1I3   For store tracks: beacon code
281 TAB4I2   For store tracks: exit fix symbol
282 THREI1   track number of previous track file in thread
283 THREI1
284 THREI2   Track number of next track file in thread
285 TIMEI1   Successful correlation time
286 TIMEI2   Successful correlation Sensor Track Number (STN)
287 TIMEI3   Successful correlation: STN presence flag
288 TNPI1    Previous track number (sector thread)
289 TNPI2    Next track number (sector thread)
290 TNPI3    Sector number
291 TNPI4    No next track this sector thread flag
292 TNTI     Index to TNT table
293 TNTI10   Primary/secondary correlation processing for this scan flag
294 TNTI2    Suspend track is actively tracking flag
295 TNTI3    Report in the secondary bin on the scan flag
296 TNTI4    DM is to be displayed flag
297 TNTI5    Aircraft flight plan status
298 TNTI6    Sector thread change request flag
299 TNTI7    Correlation flag
300 TNTI8    Inhibit PUR correlation attempt flag
301 TNTI9    Count of number of reports found in track's bin
302 XCORT    Predicted track: x coordinate
303 XYDOTI   Active tracks: x component of velocity
304 XYDOT2   Active tracks: Y component of velocity
305 XYDOT3   Flight plan or store tracks: index to APT table (exit)
306 XYDOT4   Flight plan or store tracks: index to APT table (entry), alternate primary controller
307 XYDOT4I
308 XYDOT5   Tracking table coast time of auto tab coast track
309 YCORT    Predicted track: y coordinate
310 YCORT
311 ECIDT
312 ICIDT
313 RTCQ     real time clock value
314 SECTOLQ  Psrap sector mark 0 maximum delta wait time
315 SIMSNTQ
316 SIPBLQ   128
317 SIPCSMQ  minimum sector marks for psrap to be declared in synch; 3
318 SIPDERQ  1
```

```
319 SIPIPR50 srap synch consecutive id after parity, 2
320 SIPLWIQ  srap exers without psrap input failure, 4
321 SIPPILU  8 (10, octode)
322 SIPROIQ  74000
323 SIPTFQ   srap time delay between failure, 4
324 SIPTIMEQ psrap startup time, 1
325 NSECIT   New sector referencing table (2 * 19 words), where [illegible]
326 NSECIT1  The sector number for the NSEC table slots (19 and [illegible]
327 NSECIT2  The "processing to be done" flag for the sector in the [illegible]
328 BOHTIQ   Number of hits to initiate track from beacon only initiation file
329 BOMSIQ   Number of misses to purge beacon only initiation file
330 BOWLIQ   Beacon only window length (number of scans over which hits and misses are counted)
331 DISQ     Allowable distance, in X and Y, between target and tracks for discrete correlation
332 DXYDOIQ  Velocity vector delta above which radar only initiation files are terminated
333 FIRM2Q   Special firmness used for track correlated by !PUR
334 LSPDIQ   Lower speed limit for auto initiation
335 PURTOQ   Maximum !PUR execution time
336 RBHTIQ
337 RBMSIQ   Number of misses to purge radar reinforced initiation file
338 RBWLIQ   Radar-reinforced window length (number of scans over which hits and misses are counted)
339 ROHTIQ   Number of hits to initiate track from radar only initiation file
340 ROMSIQ   Number of misses to purge radar only initiation file
341 ROTSPDIQ Speed below which radar only files are flagged as clutter files
342 ROWLIQ   Radar only window length (number of scans over which hits and misses are counted)
343 SCANIQ   Scan length
344 TIMLIQ   Lower time limit for correlation of initiation files
345 TIMUIQ   Upper time limit for correlation of initiation file.
346 !PRSECQ  Working sector # !2
347 USPDIQ   Upper speed limit for auto initiation
348 SIPIDT   (2x3) length - 1 in upper id in lower
349 RATAIT   Reports score table (parallel to RATIT)
350 RATIT    Report address table (2 * RATLENIQ)
351 RATIT1   A flag indicating whether the report for a RAT entry is in the secondary bin of the track
352 RATIT2   A flag indicating whether the report for a RAT entry is radar only
353 RATIT3   The track number with which the report for a RAT entry is associated
354 RATIT4   A flag indicating whether the report for a RAT entry is beacon only
355 RATIT5   An index for the report for a RAT entry, that points to the associated entry in the IRS table
356 RATIT6   The number of tracks that have been correlated to this report
357 RATIT7   An index for the report for a RAT entry, that points to the associated entry in the BARI
358 RATITB   The qualifying score for the report/track combination represented by the RAT entry
```

```
359 ROIII    Radar only track table (5 * ROIIQ)
360 ROIIII   Radar Only Table (ROI) : azimuth
361 ROIII2   Radar Only Table (ROI): range
362 ROIII3   Radar Only Table (ROI): y coordinate
363 ROIII4   Radar Only Table (ROI): x coordinate
364 ROIII5   Radar Only Table (ROI) : y coordinate component of velocity
365 ROIII6   Radar Only Table (ROI): x coordinate component of velocity
366 ROIII7   Radar Only Table (ROI): sliding window
367 ROIII8   Radar Only Report (ROI): firmness value
368 ROIII9   Radar Only Table (ROI): time of last correlation
369 RCONT    Table containing display parameter data
370 XIRATT   Linking execute remote table: IRATIT -) A register
371 ADBOT    Address of Beacon Only Track Table
372 ADBRITE  BRITE1T & BRITE2T table address
373 ADFIRST  FIRST Table address (NSENSQ words)
374 ADMSECT  MSECIT Table address (NSENSQ(SP) words)
375 ADRAT    RAT Table Address (NSENSQ words)
376 ADROT    ROIIT Table address (NSENSQ words)
377 ADRPT
378 ADRPT    TRSIT table address (NSENSQ words)
379 ADSUMT   Address of the SASTIT table
380 ADTIMT   Address of the STIMEIT table
381 ADTSAILL Lockout flag for Common Subroutine AI2L
382 ADTIST   Address of test target storage buffer (5 words)
383 ADTYMG
384 ADUMCONT Address of UMCONT table (NSENSQ words)
385 ADUMUSET Address of UMUSET word (1 word)
386 AFXAD    Address in AAFXP table for each subsystem (NSENSQ words)
387 AFXP     Number of arrival fix areas inhibited for auto acquisition (NSENSQ words)
388 ALRMTSF  MALRM table use flag
389 ALSENS   A flag indicating which sensor ALTRER should process
390 ALTIMP1  Altitude threshold for altitude correction; altitude correction factor
391 ALTIMP2  altitude in 100s of feet
392 AOSPACE  Address of MPEB
393 AZIRG1   First range/azimuth values for auto-drop areas
394 AZ2RG2   Second range/azimuth values for auto-drop areas
395 AZ3RG3   Third range/azimuth values for auto-drop areas
396 AZMBINS1 Table of azimuths for radar only report geographic clutter areas (inner)
397 AZMBINS2 Table of outer azimuths for radar only report geographic clutter areas
398 BART     The beacon and radar table (referenced twice: RAT, page 3.4.9-3; SDBI, page 55, data elem RBMSMT
```

399 B#MLHIT Number of scan hits required to initiate a track in (B...TT, or a the ... (B#MLM word)

400 B#MSHIT Number of scan misses allowed before purging a bea... ...r track (e.g. the ... (B#MSH word)

401 B#SWIT The number of scans that defines the window length of ... & ... from B...

402 BOITST Flag indicating a BOI table overflow

403 BRAIAS BRAIS enable/disable flag

404 BSECT Ihe tracking base sector (sect I) table

405 BSECTI Ihe tracking base sector (SECT - I) (NSENSORS*3) words)

406 BSEGT Beacon segments used for auto MSAW inhibit

407 CAALARM Original time of conflict alert alarm

408 CASENS A flag indicating which sensor CALT should process

409 CNSL719 Amount of core needed

410 CNSLALL Length of conflict table

411 CNSLNEG Negative value of CNSLALL

412 CNSLNEG1 Length of DUPAIR table minus one

413 CNSLNEG2 Length of conflict table minus 2

414 COAST1 No scans the following may coast: Unassociated Beacon

415 COAST2 No of scans an associated beacon track may coast

416 COAST3 No scans an unassociated radar track may coast

417 COAST4 No. scans an associated radar track may coast

418 CRSENS A flag indicating which sensor TCRSS should process

419 CRTCSAVE current real time clock value

420 CSAVBS Save word for BS (1 word)

421 CSECT current working sector table

422 CSECTI Current working sector (S words)

423 CTBRAT Address of subroutines & tables BRAIS uses

424 CTIPLL On call execution flags & TI code task ID (7 x 2 words)

425 CTSOVI CTS overflow flag

426 DELXFDI Maximum legal delta coordinate, X

427 DELXFDI2 Maximum legal delta of Y coordinate

428 DOVERT Radar overflow message buffer, in use in new sys?

429 DTIBUF Buffer containing test target display data

430 DUPIDLK DUPIDT table locked out flag

431 DUPIDLY Table cleared for DUPIDC

432 DUPIDT Buffer containing duplicate IDs (DUPIDO(II) words)

433 DUPIDY Duplicate ID push/pull table

434 DUPNEG1 Length of DUPAIR table minus one

435 DUPP Length of DUPAIR table (1 word)

436 EDSENS A flag indicating which sensor TEBC should process

437 ENBOOT Address of end of BOIsT table (NSENSO words), replaced w/pointer

438 ENDRAT Address of end of RAT table

439	ENDRNT	Address of end of ROUTE table no rot table usage
440	ENDWPT	Address of end of Target Report Store table
441	ESPPP	Contains an ESPP used to schedule PSRAP as a periodic popup
442	EIGFAFLG	Used to distinguish target generator status
443	EX	A set of 26 execute remote instructions to perform miscellaneous register loading and storing functi
444	FINDS	Subroutine FINDSLOTB locked out flag
445	FIRMT	Firmness table
446	FIRST	first controlled track file table 1*4 ie 1 per sensor
447	FIRST1	First track file pointer
448	FIRST1	First CONTROLLED track file pointer
449	FIRST2	Number of controlled track files
450	FREEZER	Target generator system freeze flag: freeze flag, init flag
451	FREEZER	Target generator system freeze flag: freeze flag, init flag
452	GALTIE	inhibits or clears MSAW in approach areas whenF7, V1, or F7 VE respectively
453	GMSVB1	Used by subroutine GNTRK to save B1
454	GMSVB5	Used by subroutine GNTRK to save B5
455	IA1IR1	Table contains first inner range/azimuth values for airport areas
456	IA2IR2	Table containing second inner range/azimuth values for airport areas
457	INSENS	A flag specifying which sensor TINIT should process
458	INCLQ2I	2* length of pairwise inhibit table minus 1
459	INSLI1	(length of pairwise inhibit table minus 1) * 2
460	INSLI2	(length of pairwise inhibit table minus 2) * 2
461	IR3	Table containing third inner range/azimuth values for airport areas
462	KOFUNLK	Contains E$DATA used by KOF
463	LATEND1	Set to lattice execution time
464	LDDTABL	Contains addresses and instructions of system data for use by LDDI
465	LSR1TMP	Execute remote table for loading S1 register
466	LSR1TMP	Execute remote table for loading S1 register
467	LSR2TMP	Execute remote table for loading S2 register
468	LSR2TMP	Execute remote table for loading S2 register
469	MALM	Temporary storage used by MALMOFF
470	MALRM	MSAW alarm table
471	MATTIM	Timing variable used by MAT
472	MSAWALZO	MSAW alert indicator
473	MSAWEF2	Alarm EF word
474	MSCOR1	Difference between actual & rounded altimeter correction in feet
475	MSSENS	A flag specifying which sensor MSAW must process
476	NIOPOE1	System parameter table: no. of IOPs
477	NIOPT	Device number table
478	NIOPT	Device number table

```
479 MIDET    Device number table
480 MMBEMUE1 Parameter table: no. of MCBMs
481 MRBBMUE1 Parameter table: no. of RBdMs
482 MSENSUE1 Parameter table: no. of sensors
483 MSENSUE1 Parameter table: no. of sensors
484 MSENSOE1 Parameter table: no. of sensors
485 MTRE     Common subroutine lockout flag: 42=1 if lockout flag
486 MUMDQE1  Parameter table: no. of displays
487 MUMBUE1  Parameter table: no. of keyboards
488 MUMTUE1  Parameter table: no. of tracks
489 MTIRAD   Index determining which copy of TRAD to run next
490 OA1OR1   Table containing first outer range/azimuth values for airport areas
491 OA2OR2   Table containing second outer range/azimuth values for airport areas
492 OA3OR3   Table containing third outer range/azimuth values for airport areas
493 ORTCS4YE original real time clock reading
494 OSPACE   MPEB packet used by PDUP
495 OSPACE1
496 OSPACE2
497 OSPACE3
498 PAUST    Table used by PAUS: current track being processed,no. tracks,no of exec this lattice,no. of proc so
499 PBUFCT1  Untracked target count
500 PBUFCT2  Display buffer length
501 PBUP     Untracked target display buffer
502 PRSENS   A flag indicating which sensor IPRED must process
503 PSSENS   A flag indicating which sensor IPSEC must process
504 PUSENS   A flag indicating which sensor IPUR must process
505 RAADT    Remote aural alarm display table
506 RATPIT   RAT pointer table (5 word revolving table containing indexes to RAT for sectors n-1 thru n-5
507 RATPIT1  SEE RATPIT
508 RATPIT2  SEE RATPIT
509 RATXIT   rat index table
510 RATXIT1  RAT index : next available slot in RAT (NSENSQ words)
511 RATXIT2  the next available address in RAT (NSENSQ words)
512 RATXIT3  Final address of RAT (NSENSQ words)
513 RBMSHT1  Number of scan hits required to initiate a track in the CIS from the BART (NSENSQ)
514 RBMSHT2  Number of scan misses allowed before a beacon and radar track is purged from the CIS (NSENSQ)
515 RBSHFT   The no. scans that defines the window length of the hits & misses from beac & radar tabl
516 RMGBIMS1 Radar only report geographic clutter areas range table: inner
517 RMGBIMS2 Table of ranges for radar only report geographic clutter areas: outer range
518 RRMSHT1  Number of scan hits required to initiate a track in the CIS from the radar only table (NSENSQ words)
```

```
519 RNSHIT   Tracking table  no  scans that defines the window length of the hits and misses from raf only table
520 RNCNT2   Number of scan misses allowed before a radar only track is purged from the CT. (NUMCNT)
521 RNTOV1   RNT table overflow flag
522 RNTSPED  Tracking table  max speed for declaring radar only tracks as clutter
523 RPCTR1   No  of MTG reports in sector n (.
524 RPCTR2   IRST table index
525 RPCTR3   PSRAP/MTG lockout flag (NSENSQ words)
526 RTCMASK1 Tracking table  mask for unused portion of RTC
527 S2TIME   Srap needs swapping flag
528 SALARMS1 Alarm threshold count
529 SALARMS2 Alarm count
530 SALTBCD1 Temporary storage for conversion of binary beacon only & radar reinf beacon  to BCD
531 SALTBCD2 converts beacon only and radar reinforced beacon altitudes from    Binary to Binary Coded Decimal
532 SALTBCD3
533 SALTBCD4
534 SALTBCD5
535 SALTBCD6
536 SASTIT   Target report sector access store (32 sectors by 4 sensors)
537 SASTIT1  The start index into the TRS table for the first target associated with the sector (32 by 4 words)
538 SASTIT2  The number of targets associated with the sector (32 words by 4 sensors)
539 SBAUT    Alarm label. BDAS azimuth out of tolerance
540 SBBAA    Alarm label  BDAS BEX azimuth alarm
541 SBBFDT   Alarm label. BDAS BEX FIFO data timeout
542 SBBFO    Alarm label. BDAS BEX FIFO overload
543 SBBMA    Alarm label. BDAS BEX mode alarm
544 SBBRA    Alarm label. BDAS BEX range alarm
545 SBBRP    Alarm label. BDAS BMC restart performed
546 SBDALMT  BDAS alarm index table (13 words)
547 SBDFO    Alarm label: BDAS defruiter FIFO overload
548 SBIC     Alarm label: BDAS illogical condition
549 SBIE     Alarm label: BDAS interface error
550 SBRCWO   Alarm label. BDAS rng/code words out of order
551 SBSENS   A flag indicating which sensor SWABS is to process
552 SBTO     Alarm label. BDAS BMC table overflow
553 SBTTND   Alarm label: BDAS test target not detected
554 SCALM    Execute remote table for clearing unused alarm bits from SRAP alarm messages
555 SCANIT   Scan time (NSENSQ(SP) words)
556 SCANQT1  Calculated delta scan time
557 SCANQT2  Actual scan time
558 SCTMETI  Table used by SCTME: test & set flag
```

```
SCTRK1   Current track number
SCNUM13  Number of executions that failed
SCENQ14  Number of processors
SCTME15  Time of last execution
SCES1    No. sectors in which reports were purged
SENBA1   Working subsystem for SCENE
SENBA2
SENSW8   Specifies what subsystem tracking is currently primed for
SHIHRES1 Reports calculated bad on quality for radar reinforcement (range, azm, el)
SHIHRES2 Minimum bit count threshold
SIPINDB  Sector no. that is 180 degrees behind current sector
SIPALMI1 PSRAF alarm address table (BIAS, BIAS, MP index table address
SIPALMI2 PSRAP alarm address table  BIAS
SIPALMI3 PSRAP alarm address table  MP index table address
SIPAMSK5 Mask used in SCALM execute remote table to clear unused alarm bit.
SIPB.7   Temporary 07 storage
SIPBUF   Input buffer (S * input buffer length words)
SIPCLRTC RTC value for clearing alarm counters (5 words where S is the number of SRAP
SIPCLTIM Delta RTC value for clearing SRAP alarm counters (5 words)
SIPCLTIM psrap time to clear error counter
SIPCQT   the quadrant CSECT is currently in (5 words)
SIPCSN
SIPCST   Sum of the delta scan times (5 words)
SIPCSU   Flag determining if sectors are to be updated synthetically (5 words)
SIPCTT   Number of reports in IRSIT
SIPD     SRAP disable interrupt status word storage (E$D)
SIPE     SRAP enable interrupt status word storage (E$E)
SIPENDI1 Input start index
SIPENDI2 Temporary index storage
SIPFAIL1 No. of consecutive SRAP failures
SIPFAIL2 Time of last failure
SIPFDS
SIPFLG11 Initialization flags: set/reset
SIPFLG12 Init flags: init and in sync
SIPFLG13 Init flag: in sync, no sector mark
SIPFLG14 Init flag: input parity detected
SIPFLG15 Counter for SIPFLG11 (test and set init flag)
SIPFLG16 Counter for SIPFLG12 (init and in sync init flag)
SIPFLG17 Counter for SIPFLG13 (in sync no sector mark init flag)
SIPFLG18 Counter for SIPFLG14 (input parity init flag)
```

599 SIPLRIC RIC of last declared SRAP failure
600 SIPICIN
601 SIPICIN1 SRAP initiate chain input (E$ICIN)
602 SIPICIN5
603 SIPIDER Count of number of consecutive words where message ID was not found (5 words)
604 SIPIFG1 psrap sector mark counter
605 SIPIFLG2 srap initiation flag to indicate readiness for psrap processing
606 SIPINADR PSRAP input chain address (5 words)
607 SIPIND1 Total no. of words to process this lattice
608 SIPIND2 Total number of words processed in this lattice
609 SIPIPCT1 Counts: input parity words per lattice
610 SIPIPCT2 Counts: input parity words per SRAP
611 SIPIPEX1 Sector mark initialization: index to start input parity processing (5 words)
612 SIPIPEX2 Sector mark initialization: sector mark init flag
613 SIPITO1 Input table overflow index
614 SIPITO12 Interrupt status table overflow index
615 SIPLAB PSRAP execute remote table: SRAP input buffer -) A register
616 SIPLLP PSRAP execute remote table: load logical product on upper half of word in SRAP input buffer
617 SIPLOM Length of parallel SRAP error messages to go out to SRAP output buffer (5 words)
618 SIPMOC CDI message store
619 SIPMOC2
620 SIPMOC3
621 SIPMOC4
622 SIPMOC5
623 SIPMOC6
624 SIPMOI1 flag to check message buffer
625 SIPMOI2 number of words in msg buffer
626 SIPMTB Buffer for formatted SRAP error messages (Temp Store minus 1 words by 5 words)
627 SIPMTP1 Temporary storage for formatted SRAP message to be pulled from error message queue
628 SIPMTP2 temporary storage word for the formated error msg in the error msg queue
629 SIPNCA SRAP execute remote table: no. of clutter bins -) A register
630 SIPOLS1 No. of sectors which had radar only overload per quad (4 quad by 5 sraps)
631 SIPOLS2 On where n is the quadrant number
632 SIPOSU Used to override synthetic sector update
633 SIPOSU2
634 SIPPBI Execute remote table: for pulling bottom on interrupt status word table
635 SIPPSEMS number of parallal sraps
636 SIPPUL
637 SIPRAC1 SRAP request alternate peripheral (E$RAC)
638 SIPRAC3

```
639 SIPRBL   SRAP execute remote table: lower RMI,BIM  ( W register
640 SIPRBU   SRAP execute remote table: upper RMI,BIM,  ( A register
641 SIPRIC   SRAP request interrupt capture (comm)
642 SIPRICTI Defines interrupt status word table  length of interrupt status word table
643 SIPRIET/ Interrupt status word table  address of interrupt status word table
644 SIPROT1  RTC value of last SRAP print
645 SIPROT2  Delta RTC value for printout
646 SIPRTC   Temporary storage of RTC value
647 SIPSB    Buffer input pointer (5 words)
648 SIPSBAD
649 SIPSBAD  Address of SIPSBINI
650 SIPSBIE  SRAP timeout error count (5 words)
651 SIPSBI2  SRAP input buffer pointer last lattice (5 words)
652 SIPSBINS SRAP store buffer input pointer
653 SIPSEWS1 Number of dual parallel SRAPS configured minus 1 (5 words)
654 SIPSEWS2 Target generator init flag (5 words)
655 SIPSEZ1  Sector mark zero found flag
656 SIPSEZ2  Sector mark still expected flag (5 words)
657 SIPSFM   ???????
658 SIPSFT1  RTC value of last sector failure printout (5 words)
659 SIPSFT2  Delta RTC value for printout
660 SIPSIC   Delta sector time (5 words)
661 SIPSME1  Count of sector numbers out of sequence (5 words)
662 SIPSME2  Next expected sector mark (5 words)
663 SIPSSF1  SRAP startup flag
664 SIPSSF2  Sector mark zero late flag (5 words)
665 SIPSTART RTC value at SRAP startup (5 words)
666 SIPSTAT  SRAP buffer for interrupt storage (5 words )
667 SIPSTS
668 SIPSTS1  Number sector marks not equal to CSECT (5 words)
669 SIPSTS2  Fail count threshold  (5 words)
670 SIPSX1   PSRAP execute remote table: =0 => SRAP input buffer
671 SIPT     RTC value when next sector should be declared (5 words)
672 SIPTEMP  The SRAP message to be processed (5 words)
673 SIPTEMP2
674 SIPTEMP3
675 SIPTEMP4
676 SIPTEMP5
677 SIPTEMP6
678 SIPTIO   Terminate input/output (EBTIO)
```

679 SIPTIU3

680 SIPTLT RTC value of last change in SBIN by SRAP (1 word)

681 SIPIMG1

682 SIPIMG2

683 SIPIMG3

684 SIPIMG4

685 SIPIRX1 Temporary storage for target report input messages (5 words)

686 SIPIRX2 temporary storage for target reports

687 SIPIRX3

688 SIPIRX4

689 SIPIRX5 psrap temporary target store, fifth word

690 SIPIRX6

691 SIPTIF1 Number of test targets that failed the range/azimuth check (5 words)

692 SIPTIF2 Fail count threshold (5 words)

693 SIPULL PSRAP execut remote table: pull bottom instruction

694 SIPUSH PSRAP execute remote table: push top instruction

695 SIPWSI1 Number of scans waiting for sector mark zero (5 words)

696 SIPWSI2 Threshold for declining failure (5 words)

697 SLCSLR Linking execute remote table: RLP on LNKiI

698 SLCLR Linking execute remote table: RLP on LNKiT

699 SLCNTCL Linking execute remote table: RLP on LNKiI

700 SLGLR Linking execute remote table: LNKiT -) A register

701 SLNRTM RTC value at SLTNR entry (RTC is in units of time)

702 SLT7LR Linking execute remote table: LNKiT -) A register

703 SLTILR Linking execute remote table: LNKiT -) A register

704 SLTRK Track found flag

705 SMPOFF Alarm label: MP output FIFO full

706 SMPRBS Alarm label: MP RDAS/BDAS sectors not equal

707 SMPRDF Alarm label; MP RDAS data error

708 SMPRT Alarm label: MP RDAS timeout

709 SMPSF Alarm label: MP startup failure

710 SMPTO Alarm label: MP table overflow

711 SNRORP1 Number of radar only reports per sector (5 words)

712 SNRORP2 Threshold at which radar only reports per sector are discarded (5 words)

713 SOVERT Overload sensing and protection flag (5 words)

714 SRAOT Alarm label: ROAS out of tolerance

715 SRAPNI1 Relative peripheral numbers of the dual SRAP (5 words)

716 SRAPNI2 Alternate relative peripheral numbers of the dual SRAP (5 words)

717 SRAPOFF SRAP disabled flag (5 words)

718 SRIC Alarm label: ROAS illogical condition

719 SRKYFLAG Keyboard initiated SRAP switch flag
720 SRP1C1 Current target report store index (S words)
721 SRP1C2 Number of reports in the current sector (S words)
722 SRRDAA Alarm label: RDAS REX detected azimuth alarm
723 SRRDE Alarm label: RDAS RMC detected error
724 SRRDRA Alarm label: RDAS REX detected range alarm
725 SRRDT Alarm label: REX/RMC data timeout
726 SRRFO Alarm label: RDAS REX/RMC FIFO overload
727 SRRO Alarm label: RDAS RMC overload
728 SRRRP Alarm label: RDAS RMC restart performed
729 SRRSDT Alarm label: RDAS restart data timeout
730 SRRTO Alarm label: RDAS RMC table overflow
731 SRSINX1 Next available open IRSiT index (S words)
732 SRTIND RDAS test target not detected
733 STACKTO *Processor save (push) and restore (pull) table control words*
734 STAROR Radar only overload function enabled flag
735 STIMEIT Target report sector time store (32 sectors by 4 sensors)
736 STMOVT Sensor overflow flag (MSENSQ words)
737 STTAZM1 Test target azimuth upper limit (S words)
738 STTAZM2 Test target azimuth lower limit (S words)
739 STTRNG1 Test target range upper limit (S words)
740 STTRNG2 Test target range lower limit (S words)
741 STTSTR Buffer containing target report store formatted test targets (6 by S), where 1 S Fu, 4 6 Bu
742 SWAZ1RG1 Partial auto-acquire, auto-drop tables: first range/azimuth for auto drop
743 SWAZ2RG2 Partial auto-acquire, auto-drop tables: second range/azimuth for auto drop
744 SWITOVER SRAP keyboard processing function request flag
745 SWOVAR1 Partial auto-acquire, auto-drop tables: first range/azimuth for auto acquire
746 SWOVAR2 Partial auto-acquire, auto-drop tables: second range/azimuth for auto acquire
747 SWSEMS Indicator for subsystem used by keyboard configuration
748 SWUNRF Partial auto-acquire, auto-drop table, unknown arrivals for auto drop
749 SYSLOAD System load indicator (set by TEXEC)
750 SYSRO Radar only processing disable table
751 SZALARM Execute remote word for incrementing 86 by MSENSQ
752 TALTIMP1 TALTIMP1 Training altimeter correction: altitude where correction necessary
753 TALTIMP2 TALTIMP2 Training altimeter correction: correction factor
754 TBCNT Execution flag table
755 TERMTRL Tracking overloaded and sensors lost flag (set in TEXEC) (MSENSQ words)
756 TESTFLG Test target enable/disable flag; display no. that requested display of test target
757 TGTGEN1 Target generator active/not-active (test mode) flag
758 TGTGEN2 Target generator is active flag

759 TRDEL Training track considered for deletion cod
760 TRMCORT Difference between actual and rounded altimeter correction (for training)
761 TUX1 Track numbers: maximum trial
762 TUX2 Track numbers: maximum normal
763 TRAMIF Conflict alert training interface flag
764 TRAT1 Tracking table: length of RAT
765 TRAT2 Length of RAT minus 1
766 TRAXIP Addition constant for translating x coord from one subsystem to another (4 sensors by 4 systems)
767 TRAYIP Addition constant for translating y coord from one subsystem to another (4 sensors by 4 systems)
768 TRXXT1 Central track store index table: track number (10 words)
769 TRXXT2 Central Track Store (CTS) Index Table: track file address
770 TRSEMS A flag specifying which sensor TROUT is to process
771 TRST10R1 Maximum number of radar only reports allowed per sector when overload sensing & protection is enable
772 TRST10R2 Contents of TRST10R1 minus 1
773 TSFBC Common subroutine lockout flag: subroutine DUPBC
774 TSSSIT Track Sector Summary Table (TSSS)
775 TSSSITIA (TSSS): a flag specifying whether or not there are any tracks in this sector
776 TSSSITIB Track Sector Summary Table (TSSS): the number of tracks in this sector thread
777 TSSSIT2 Track Sector Summary Table (TSSS): starting track number of the first threaded track in this sector
778 TUDCFH1 Thread change flag: CTS
779 TUDCFH2 Thread change flag: TNP
780 UNCONT1 The file number of the first file in the related uncontrolled track thread
781 UNCUNT2 The count of the number of files in uncontrolled track thread
782 UNCONT11 uncontrolled track pointer table, not unused
783 UNRG Range/azimuth values for auto-drop table: unknown arrival range
784 UNUSET1 The file number of the first file in the unused track thread
785 UNUSET2 The count of the number of files in the unused track thread
786 XTRAXT Linking execute remote table: TRAXIP -) A register
787 SIPABL SRAP execute remote table: for loading Q-register from AZMBIN1 (lower)
788 SIPABU SRAP execute remote table: for loading A-register from AZMBIN1 (upper)
789 SIPBUFAD SRAP input buffer address (S words)
790 SIPCHI PSRAP chain command table (S words where S is equal to the number of SRAPS)
791 SIPLTS Length of TRSIT table (S words)
792 SIPMNRS1 Maximum no. of reports for TRSIT
793 SIPMNRS2
794 SIPOVER1 Execute remote table: SRAP input buffer -) A register
795 SIPOVERS Execute remote table: SRAP interrupt status word buffer -) A register
796 SLSCLR Linking execute remote table: SLQ -) Q register
797 SLSCSLR Linking execute remote table: SLQ -) Q register
798 SLSLR Linking execute remote table: ROR on LNKIT

799 SLSFILE Linking execute remote table: A register -) LME1I

800 SLS12LE Linking execute remote table: A register) LME1I

801 SLFLE Linking execute remote table: LME1I -) A register

802 SMPALMI Merge processing alarm index table

803 SPEEDP1 Tracking table- upper speed limit for auto initiation (MSENSU words)

804 SPEEDP2 Tracking table: lower speed limit for auto initiation (MSENSU words)

805 SRDALMI RDAS alarm index table

806 SYNT Keyboard input table: miscellaneous data

807 TIME1 Tracking table: successive correlation maximum time interval

808 TIME2 Tracking table: successive correlation minimum time interval

809 TQE Number of track files

810 TREXT Central track store index table (2 by TQ, where TQ is max track data files)

811 VELQT Tracking table: max velocity in which a track may auto drop

812 ADBPK Display packet store

813 ADSTCT Address of the first entry in the STMCTS table (1 word per sensor)

814 ADTRNT1 Address of the TRN1T table

815 ADTRNT2 Address of the TRN2T table

816 ADTRNT3 Address of the TRN3T table

817 ADTRNT4 Address of the TRN4T table

818 AMCT Tables for Amplify function

819 AMERMAT Output buffer for Amplify function

820 APACK Display packet store

821 APT Airport table (airports & fixes in TI code)

822 AQLR2T Bit encoded keyboards (31 - 60) for adapted displays quick look

823 AQLR3T Bit encoded keyboards (61-90) for adapted displays quick look

824 AQLRCT Bit encoded keyboards (1 - 30) for adapted displays quick look

825 AQLRNGT Range inside which tracks will be quick looked ,no quick look

826 ARTEID Source identifier for MY TRACON (1 word)

827 ATRNGB Bit encoded training displays (2 words)

828 AWD1 A word table (32 words)

829 BCOMFLG A flag indicating primary/alternate sensor for displays

830 BCWCAM BCW command table

831 BCWT Tables containing buffer control words for system data

832 BLACAW MSAW/CA inhibited flag

833 BRITE1T Buffer for first BRITE tabular list (11 words)

834 BRITE2T Buffer for second BRITE tabular list (11 words)

835 BSCFRT Legal sensor indicator in TI code

836 BSWCNT Flags: which sensors need changing; which sensors are currently realigning; we are aligning

837 BSWFLG Flags: No. sensors processed; whether first pass

838 CACIDIX TI character tables

```
839 CAC1D2T  II character tables
840 CAC1D3T  II character tables
841 CAINT    Display tables
842 CANCAT   System display chain
843 CAOF     Subroutine swap table
844 CAOFTS   Temporary storage
845 CFG12T   Temporary storage
846 COFADC   Address of non-standard configuration tables (2 words)
847 COUNT    Keyboard counters (21 bit fields)
848 COUNT    Keyboard counters (21 bit fields)
849 CPSFLAG1 CA displays disable flag
850 CRTXT1   Product of current range & offcenter of coordinate, complimented, scaled * 4: X coordinate
851 CRTXT2   Product of current range & offcenter Y coord, complimented, scaled *4
852 CSBT     X, Y base coordinate
853 DBCOUNT1 Altitude data block counter
854 DBCOUNT2 Single Symbol counter
855 DBCOUNT3 Full data block counter
856 DBMAD2   Next available DBM address for MSAW and full data blocks (2 words)
857 DBMADS1  Next available DM address for single symbols and altitude data blocks
858 DCODT    Temporary storage table
859 DCONT    Table containing display parameter data
860 DCONT    Table containing display parameter data
861 DEGRDT   Table used for DBM display output
862 DFLAGT   Table containing display parameter data
863 DFLAGT   Table containg display parameter data
864 DFLAGT   Table containing display parameter data
865 DJMT     A PLPR instruction
866 DISTRT   Contains MDBM parameter data
867 DMFLAG   Temporary storage
868 DPRAD    DBM address for keyboard on display (3 words, 1 for each display)
869 DSLIMT   DM address where data tykpes sublist begins; no. of sublist entries possible
870 DSLW     Shift instruction
871 DSPRT    Display print inhibit flag
872 DTE2     No. words of data type 1 that can be processed in dead time: Small
873 DTE3     No. words of data type 2 that can be processed in dead time: Small
874 DTE4     No. words of data type 3 that can be processed in dead time: Small
875 DTP      Dead time: Small
876 E1R      Constant: 040000,0
877 ELDDDT   Time interval between data loss messages
878 EMRFT    EM & RF counter table for subsystems 1,2,3,& 4.
```

879 ERMAT Output buffer for the tab display of aca readout requests
880 FIXCVT Fix designator symbols table
881 FPFLGI MIFPY variable: input ready flag, flight plan inhibit flag
882 FREEZET System freeze flag
883 +RIC FIG related data: freeze time RIC correction value
884 FUNCON Miscellaneous flag
885 FUNCT Address of function processing routines; function characters
886 GOEXFX Normal exit jump table
887 HJT Table contains HJ & SA counters for subsystems 1,2,3,& 4
888 HVYCH Heavy jet table containing aircraft category/flight plan status codes
889 ICHPNT Contains pointer to the input chain
890 IDUBF Keyboard track information
891 INFUSE Misc. variables: test & set for INT available
892 INIFC1 Interfacility data word
893 INIFC2 Interfacility inhibit flag
894 ICE Exit jump table: capacity error exit
895 ICONT Keyboard parameter data
896 IDUPAE Exit jump table: DUP ID error exit
897 IDUPBE Exit jump table: DUP BCN error exit
898 IFORME Exit jump table: Format error exit
899 IICE Exit jump table: ILL CHAR error exit
900 IIFIHE Exit jump table: IF INHBT error exit
901 IIFE Exit jump table: IF WAIT error exit
902 IILFE Exit jump table: ILL FNCT error exit
903 IILINE Exit jump table: ILL LINE error exit
904 IILPSE Exit jump table: ILL POS error exit
905 IILTRE Exit jump table: ILL TRT error exit
906 KIPKY Switch table: KIP print inhibit
907 KITRGE Exit jump table: OUT RNGE error exit
908 KOFKEY KOF switch table
909 KOFTME Time KOF was entered
910 KOFTNG Miscellaneous variable: training flag
911 KSLEWE Exit jump table: NO SLEW error exit
912 KYBDT Table containing BRITE data
913 KYBDX Miscellaneous variable: keyboard index
914 KYBTMP Miscellaneous variable: temporary storage
915 LAWORD Miscellaneous variable: LA/CA store
916 LSTRTC Saved value of RTC to detect if the RTC has rolled over
917 MBADET Last bad status interrupt with input parity received (1 per MDRM)
918 MBADF Count of received: bad status interrupts; external interrupt parity errors (1 per MDRM)

919 MBADN Last bad status interrupt received

920 MBADOP Last bad status interrupt with output parity received

921 MBST MDBM display output processing table: next starting address for output chain

922 MCAD MDBM display output processing table: next available address for insertion into output chain

923 MCOMI MDM parameter table

924 MEMRT Memory readout request table

925 METIM Next time (in RTC time units) that interrupts are to be enabled for MDBM (1 per MDBMI

926 MFAD MDBM display output processing table: first address in chain area

927 MFAILF MDBM display output processing table: failure count

928 MFUNCT Keyboard multifunction table

929 MFVGF Miscellaneous variable: MSAW approach monitor entry flag

930 MICNTR MDBM display output processing table: interrupt count

931 MIFDIG MDBM display output processing table: digits for teletype output

932 MINCH Input chain table

933 MINIBT MDBM display output processing table: status queue BCW

934 MINTT MDBM display output processing table: interrupt entrance address

935 MIPAR Input processing table: temporary storage for input parity error status

936 MIPF Input processing table: count of number of input buffer parity errors received

937 MIPPT Push/pull control tables: input buffer parity storage table for MDBMs

938 MIPST DBM output variables: BCW for P-stack output

939 MISAVA MDBM display output processing table: temporary storage for A register

940 MISIL MDBM display output processing table: SIL instruction

941 MISTG DBM output variables: BCW for stagger sublist output

942 MLAAD MDBM display output processing table: last avail addr in chain area before overwrite occurs

943 MLAD MDBM display output processing table, last addr in chain area

944 MLBF MDBM display output processing table: last MSSI word used

945 MLCL Display output processing table: last addr where an IOCL instr was stored in chain

946 MMINI MDBM display output processing table: interrupt routine

947 MPSTACX DBM output variable: PSTACX for DBM refreshed displays

948 MPTEM DBM selection bits

949 MPULT Push/pull control tables: used to retrieve data from the MBDM input buffer

950 MRDKY Switch table: memory readout enable

951 MRET MBDM display output processing table: retry counter for restarting a stopped chain

952 MSAWIE MSAW inhibit flag

953 MSCAWD Miscellaneous varible: temporary store

954 MSCBWD Miscellaneous variable: temporary store

955 MSLPX MDBM display output processing table: status loop indexes

956 MSTAGT Output variable: A-word,B-word, & gross carriage returns

957 MSTAT MDBM display output processing table: interrupt status word storage

958 MSWKY Switch table: MSAW print inhibit flag

959 MIILGI Variable. MIIP init flag; mag tape busy flag

960 MIISW Variable no time check on flight plans flag

961 MIPDSC Variable: flight plan disk drive no ; flight plan source flag (disk or tape)

962 MISI2Y Variable: external interrupt status word storage

963 MISIP Variable: current time for flight plan time check, no retries if error detected

964 MISIY Variable: external interrupt status word storage

965 MBUFLG Output variable: no. display buffers in system

966 MCJGI Current configuration numeric

967 MIOPOE Table of site variables: number of IOPs

968 MMDBMOE Table of site variables: no. of MDBMs

969 MRDBMOE Table of site variables: no. of RDBMs

970 MSENSOE Table of site variables: no. of sensors

971 MUMBCWS Output variable: no. of BCWs needed to flood DBM chain

972 MUMBOE Table of site variables: no. of displays

973 MUMBOE Table of site variables: no. of displays

974 MUMKBOE Table of site variables: no. of keyboards

975 MUMTOE Number of tracks

976 OCDSC MDBM display output processing table: previous output chain pointer

977 P2FLGM Miscellaneous variable: CFG print flag

978 PACK1T Miscellaneous variable: MPEB packet

979 PACK2T Miscellaneous variable: MPEB packet

980 PAIRT Keyboard table: keyboard data miscellaneous

981 PAIRT Keyboard tables: keyboard data miscellaneous

982 PREVT Keyboard table: miscellaneous preview data

983 PRGLVL Miscellaneous variable: program level

984 PRIPHI MDBM table: relative peripheral number

985 PULST Keyboard table: horiz & vert changes of trackball in radar coord

986 QLRC2T Display table: keyboards for which quick look switches have been selected (31 40)

987 QLRC3T Display table: keyboard for which quick look switches have been selected (41 50)

988 QLRC4T Display table: keyboards for which quick look switches have been selected (51 60)

989 QLRECT Display table: keyboards for which quick look switches have been selected (1 30)

990 QUIET Keyboard table: miscellaneous quick look data

991 QUIET Keyboard table: miscellaneous quick look data

992 RCNP Variable: no. of flight plan files to pass over

993 RCONT MDBM table: miscellaneous message acknowledge data

994 RECYT Variable: flags used while recovering from detected error

995 RFILT MDBM table: range filter table

996 RTCOUM *MDBM table: re-transmit counter for RDBM*

997 RTCTY1 Variable: next data flag

998 RTCTY2 Rewind flag

999	RTIMLT	RDBM table: system time of last message received
1000	RTRANI	RDBM table: re transmit request message no. : input,output
1001	RWFLT	Variable: no. flight plans to pass over ; 24 hour clock rewind flag
1002	SAI	Table contains nothing !
1003	SAVB4W	Variable: temporary storage
1004	SAVB5W	Variable: temporary storage
1005	SAVB6	Variable: temporary storage
1006	SAVB7W	Variable: temporary storage
1007	SAVE	Miscellaneous variable: temporary storage
1008	SCODI	Display table
1009	SCI	Selected code display table
1010	SCI1	Selected code display table
1011	SDABI	Display table: system data B word
1012	SELINT	Variable: flight plan input day code; HIFP selected time for inputs
1013	SLEWI	Miscellaneous variable: temporary storage
1014	SRPRT	Switch table: SRAP print inhibit flag
1015	SRQW	Miscellaneous variable: shift instruction
1016	STNDEX	Sensor track number control table: sensor track number index table (NSENSQ words)
1017	STNLO	Sensor track number control table: sensor track number index lockout table
1018	SUPRT	Switch table: supervisory position key
1019	SVEOFB2	Miscellaneous variable: save B2
1020	SYMBLS	Miscellaneous variable: temporary storage
1021	SYMF	
1022	SYSLVL	Related tables: system level display data table
1023	SYSLVI	Related tables: II coded name of system operational program currently being executed
1024	TABBT	Keyboard table: miscellaneous X, Y base coordinate data
1025	TAST	Output buffer: system time
1026	TASTI	Output buffer: satellite 1 -) 3 unique altimeter, ATIS & CST
1027	TASTO	Output buffer: Host altimeter, ATIS, & GSI
1028	TBAL1T	Keyboard table: miscellaneous first entered trackball data
1029	TBAL2T	Keyboard table: miscellaneous second entered trackball data
1030	TBCWT	System data BCW table for (for training)
1031	TBLMCT	RDBM table: no. coast/suspend tracks, no. of store tracks processed by RTDMP
1032	TBPRET	Keyboard table: trackball A & B word buffer . . . etc;
1033	TBT	Tab line ID indicator: keyboards 0 -) 30
1034	TBT2T	Tab line ID indicator: keyboards 31 -) 60
1035	TBT3T	Tab line ID indicator: keyboards 61 -) 90
1036	TBT4T	Tab line indicator: keyboards 91 -) 120
1037	TDOPT	Display counter
1038	TEMP	Miscellaneous variable: temporary storage

1042 [illegible] Counters for display of FR (training status)

1043 TLLAG Watch pad altitude display flag

1044 TFRIC TIG related data: freeze time RIC correction value (training)

1045 TMJJ Counters for display of MJT (training status)

1046 TRRCAT Display table: miscellaneous display data

1047 TMDAMI Time of day in minutes

1048 TMDAST Time of day in seconds

1049 TMDYRIC Temporary storage for RIC when checking to see if it has rolled over

1050 TMGACI TIG-related data: no. training displays in system

1051 TRN1T *Tracking translation table, sensor 1 to others: (2 by 4, where 1 = 1, 2 = 2, sensors 1-4)*

1052 TRN2T Tracking translation table, sensor 2 to others: (2 by 4, where 1 = 1, 2 = 2, sensors 1-4)

1053 TRN3T Tracking translation table, sensor 3 to others:

1054 TRN4T Tracking translation table, sensor 4 to others:

1055 TS1T Last flight plan table (bulk store): word 1

1056 TS2T Last flight plan table (bulk store): word 2

1057 TSAT Counters for display of SAT (training status)

1058 TST Last flight plan table (bulk store): word 3

1059 TSTKT Switch table: test mode enable

1060 TTASI Output buffer: system time (training)

1061 TTMDAMI Time-related variable: time of day in minutes (training)

1062 TTMDAST Time-related variable: time of day in seconds (training)

1063 TTYINB Miscellaneous variable: reconfiguration inhibit flag

1064 TTF Force aircraft type display table

1065 TTI Inhibit aircraft type display range table

1066 TTPIT Display table: last correctly received type I data word received from display

1067 TZULUR Time related variable: difference between the RIC and time of day (training)

1068 UAFLT Display table: altitude filter - lower and upper limit

1069 VIALT IFR/VFR related data: VFR/IFR code block data table

1070 VICADT IFR/VFR related data: contains addresses of VICRT & VICRT tables

1071 VICWT IFR/VFR related data: computer-assigned beacon code table

1072 VICIXT IFR/VFR related data: VFR/IFR index table

1073 VICWT IFR/VFR related data: temporary working table

1074 VICRT IFR/VFR related data: IFR/VFR code request table

1075 VICRT IFR/VFR related data: IFR/VFR code request table (training)

1076 ZULUL Time related variable: difference between the RIC and time of day

1077 WRAPTIME wraparound (add on) time to convert to 24 hour clock, 500

1078 SIPSTEQ psrap length interupt status table

1079 SIPIOSEQ OUTPUT TIME FOR SENSOR MESSAGE: 74000

1080 VAQ Beacon code validity value below which the code is considered to be bad

1081 AAMC Temporary storage

1079	AAITM	Temporary storage
1080	ACTTPW	Temporary storage
1081	ADYLC	Temporary storage (1 word)
1082	ADTRE	Temporary storage
1083	ARCTOK	Temporary storage (2 words)
1084	BEACMC	Temporary storage
1085	BIND	Temporary storage (1 word)
1086	CHGFLG	Temporary storage (1 word)
1087	CLDTRE	Temporary storage (1 word)
1088	CONTRC	Temporary storage
1089	DBCNT	Temporary storage (14 words)
1090	DSPCLR	Temporary storage
1091	DTCHGFLG	Used to determine if an altitude data block has changed
1092	DUPBCE	Temporary storage
1093	DUPHOC	Temporary storage (3 words)
1094	DUPTSB	Temporary storage (1 word)
1095	ECIDIC	Temporary storage (1 word)
1096	ETAC	Temporary storage
1097	FIXC	Temporary storage
1098	INIT	Temporary storage
1099	LRDTRE	Temporary storage
1100	MAXBTC	Temporary storage
1101	MSHTMP	Temporary storage
1102	PACKAD	Temporary storage
1103	PAKET	Temporary storage
1104	PASBI	Temporary storage
1105	PASTME	Temporary storage
1106	PFTMP	Temporary storage
1107	PSCPAR	Temporary storage
1108	PSCTMP	Temporary storage
1109	RDELTZ	Temporary variable: reflect flag
1110	SAVD2	Temporary storage
1111	SAVE1D	Temporary storage
1112	SCP00	Temporary store
1113	SCPDW	
1114	SCPWW	
1115	TCIBT	Temporary storage
1116	TEMTR1	Temporary storage
1117	TEMTR2	Temporary storage
1118	TEMTR3	Temporary storage

```
1117  TEMTRE   Temporary storage
1118  XX16     Temporary storage
1119  TRADD2   Temporary storage
1120  TRADD3   Temporary storage
1121  TRADD4   Temporary storage
1122  TRADCIS  Temporary storage
1123  TRADCKS  Temporary storage
1124  TRADS1   Temporary storage
1125  TRADSCF  Temporary storage
1126  TRSIC    Temporary storage
1127  TREALT   Temporary storage
1128  TRECLR   Temporary storage
1129  TRSFAM   Temporary storage
1130  TSECCA   Temporary storage
1131  TRERBC   Temporary storage
1132  TRINDX   Temporary storage
1133  XDELTX   Temporary variable (total time elapsed in x direction
1134  YDELTY   Temporary variable, total time elapsed in y direction
1135  TRSIT    Target Report Store (TRS) table
1136  TRSI01   Target report azimuth (one entry per sensor)
1137  TRSIT10  Target report A/A code validity code (NSENSW words)
1138  TRSIT11  Target report beacon code (one per sensor)
1139  TRSIT12  Target report strength flag (one per sensor) Values true strong, false weak
1140  TRSIT13  Target report mode C validity code (one per sensor)
1141  TRSIT14  Target report mode C altitude (NSENSO words)
1142  TRSIT15  Target report range (one per sensor)
1143  TRSIT16  Target report radar reinforced flag (one per sensor)
1144  TRSIT17  Target report radar report quality (one per sensor)
1145  TRSIT18  Target report TPUR use inhibited flag (one per sensor)
1146  TRSIT19  Target report emergency flag (one per sensor)
1147  TRSIT20  Target report training target generator flag (one per se
1150  TRSIT17  Target report in IFR mode flag
1151  TRSIT18  Target report used flag (one per sensor)
1152  TRSIT19  Target report special position flag (one per sensor)
```

	DATANAME	SECTION	PAGE	DATABASE		TYPE	VARNAME	DBNAME	TT/TK
	aaaA	3.139	3.0-40	MSITEQ		i	ARR_STATUS_DEF_ARPT	TRACK	TTAPTID
	aaaD	3.139	3.0-40	MSITEQ		i	DEPT_STATUS_DEF_ARPT	TRACK	TTAPTID
c	AkQ	3.85	3.0-31	DSITEQ	KBDT TBPRET SYMT	TA	KYB_TYPE.AKQ	KBD	TTKEYBRD
M/A-	AAIjQ	3.55.14	3.0-24						
M/A-	AADTQ	2.158	2.0-36	TI	MSITEQ	i	DEDS_SSFDB_AWORD_DISP_TIME	DISP	
M/A-	AAFijQ	3.55.15	3.0-24						
c	AAZaiQ	3.33	3.0-9	TSITEQ	AAFXP	T		TRACK	TTAUTOAQ
c						r	AIRPORT_ARRS(.i.).AZIM_START		TTAUTOAQ
c						r	AIRPORT_ARRS(.i.).AZIM_STOP		TTAUTOAQ
c	AAZmiQ	3.30-31	3.0-8	TSITEQ	OVAR2 OVAR1	b	AIRPORT_ARRS(.i.).ARPT_INHIBIT(.j.)		TTAUTOAQ
c						T		TRACK	TTAUTOAQ/DB
c						r	OVERFLIGHTS.AZIM_START		TTAUTOAQ
c						r	OVERFLIGHTS.AZIM_STOP		TTAUTOAQ
c						r	ARRIVALS.AZIM_START		TTAUTOAQ
c						r	ARRIVALS.AZIM_STOP		TTAUTOAQ
c						r	AIRPORT_DEPTS(.i.).ARPT_DATA_SDY.INNER_AZIM_1		TTAUTOAQ
c						r	AIRPORT_DEPTS(.i.).ARPT_DATA_SDY.INNER_AZIM_2		TTAUTOAQ
c						r	OVERFLIGHTS.AZIM_START		TTAUTODR
c						r	OVERFLIGHTS.AZIM_STOP		TTAUTODR
c						r	DEPARTURES.AZIM_START		TTAUTODR
c						r	DEPARTURES.AZIM_STOP		TTAUTODR
c						r	AIRPORT_ARRS(.i.).RNG_AZIM_SDY.AZIM_START		TTAUTODR
c						r	AIRPORT_ARRS(.i.).RNG_AZIM_SDY.AZIM_STOP		TTAUTODR
c	AAZLmiQ	3.31	3.0-8	TSITEQ	OA2OR2 OA3OR3 OA1OR1	T		TRACK	TTAUTOAQ
c						r	AIRPORT_DEPTS(.i.).ARPT_DATA_SDY.AZIM_2_START		TTAUTOAQ
c						r	AIRPORT_DEPTS(.i.).ARPT_DATA_SDY.AZIM_2_STOP		TTAUTOAQ
c						r	AIRPORT_DEPTS(.i.).ARPT_DATA_PRIM.AZIM_3_START		TTAUTOAQ
c						r	AIRPORT_DEPTS(.i.).ARPT_DATA_PRIM.AZIM_3_STOP		TTAUTOAQ
M/A-	ABDTQ	2.104	2.0-18	TI	DTADQ	i	TMSHR_DT_ABD_PARM	DISP	
M/A-	ABEAT	2.165	2.0-37				CTS_REFS_SIZES_WORD_8	SPARM	
c	ABET					T	TPIRM_TABLE	TRACK	TTABET
M/A-	ABIASQ	2.26	2.0-5						
M/A-	ACMQ	8.3.1	8.0-9						
c	ACNTQ	3.54.13	3.0-17	TSITEQ	TINIT	i	NO_SCAN_TARGET_HITS	TRACK	TKTRKPRM
M/A-	ACPZONEQ	1.126	2.0-28	TI		i	MTRK_ACPZONE	TRACK	
M/A-	ACQ	8.4.1	8.0-15					MSAW	
M/A-	ACTYPT	2.165	2.0-39				CTS_REFS_SIZES_WORD_27	SPARM	
M/A-	ADIjQ	3.55.14	3.0-24						
M/A-	ADAQ	8.2.1	8.0-1						
M/A-	ADUNQ	3.119	3.0-36	MSITEQ	DSLIMT				
M/A-	ADUBP	2.41	2.0-8						
c	AFIRMQ	2.126	2.0-26	TI	TINIT	ebc	MTRK_FIRM_AUTO_AC	TRACK	TKTRKPRM
c	AFIXaiQ	3.32	3.0-9	TSITEQ	AFXP AAFXP	Ti	NUM_ARR_FIX_AREAS	TRACK	TTAUTOAQ
M/A-	AFRMQ	2.27	2.0-5						
c	AFXP					Tb	ARR_INHIB_AREA		TTAUTOAQ
M/A-	AIFRQ	3.20	3.0-5	DSITEQ	TIALT		ALPHA_CHAR_IFR		
M/A-	AIMOQ	2.17	2.0-4	TI	IDAT	r	IFY_ALLOC_MILES	IFY	
M/A-	ALALT	7.5.3	7.0-44						
M/A-	ALARMQ	7.6.2	7.0-45						
c	ALSET					Tr	ALTIMETER.ALTIM_SETTING		TTALT
M/A-	ALT	2.165	2.0-38						
c	ALTAQ	2.2	2.0-1	TI	MSAW	Ti	ALTIMETER.ALTITUDE	KBD	TTALT
M/A-	ALTMASKQ			MSITEQ	ALTMASK		ALT_MASK		TKMISC

N/A-ANCRESQ							LENGTH_TTY_INPUT_BUFFER	SPARM	
N/A-ANCRESQ							ON_CALL_COMM_AREA_LNGTH	SPARM	
N/A-ANCRESQ		3.0-34	HSITEQ	BRATS CTIP DTOD FPDU LIND		i	LENGTH_TTY_INPUT_BUFFER	SPARM	
N/A-ANCRESQ		3.0-34	HSITEQ	HTGA HTGCT SCDU TSO TI				SPARM	
N/A-ANCRESQ		3.0-34	HSITEQ	HTGA HTGCT SCDU TSO				SPARM	
N/A-ANCRESQ	2.127	2.0-29							
N/A-ANCRESQ	3.109	3.0-34							
N/A-ANCTK1Q	2.127	2.0-28	TI			i	ON_CALL_INITIALIZE	SPARM	
N/A-ANCTK2Q	2.127	2.0-28	TI			i	ON_CALL_EXECUTE	SPARM	
N/A-ANCTK3Q	2.127	2.0-28	TI	BRATS CTIP DTOD FPDU LIND scdu tso		i	ON_CALL_TERM_ENABL_FLAG	SPARM	
N/A-ANCTK4Q	2.127	2.0-28	TI	BRATS DTOD FPDU LIND SCDU tso		i	ON_CALL_MSG_PREFIX_AREA	SPARM	
N/A-ANCTK5Q		2.0-28	TI	CTIP		i	ON_CALL_INPUT_TTY_MSG	SPARM	
N/A-ANCTK6Q	2.127	2.0-28	TI	DTOD FPDU LIND HTGA HTGCT scdu tso		i	ON_CALL_UNPACK_TTY_MSG	SPARM	
N/A-ANCTK7Q	2.127	2.0-29	TI	BRATS CTIP FPDU IPO KIP		i	ON_CALL_PASSED_DATA	SPARM	
N/A-ANCTK7Q	2.127	2.0-29	TI	LIND RKIP SCDU TSO		i	ON_CALL_PASSED_DATA	SPARM	
c AOPSTLQ	3.46	3.0-14	HSITEQ	SDB2		boo	AUTO_OFFSET_ENABLE	DISP	
N/A-APAijQ	3.55.9	3.0-22a							
N/A-APALijQ	3.55.8	3.0-22							
N/A-APHiQ	3.99	3.0-32							
N/A-APMijQ	3.55.1	3.0-19							
N/A-APRijQ	3.55.9	3.0-22a							
c APTnQ	3.37	3.0-11	DSITEQ	APT		TA	AIR_FIX_TYPE		TTAPTFIX
c APTQ	3.37	3.0-11	DSITEQ	APT			NO_FIXES_AND_AIRPORTS		TKRANGE
N/A-ARijQ	3.55.14	3.0-23							
c ARCSIQ	3.9	3.0-2	DSITEQ	IDAT		A	ARTCC_SOURCE_ID	IFT	TKMISC
N/A-AREASQ	2.28	2.0-6							
N/A-AREATQ			TI	ALTRKR ALTRKR1		i	INIT_ALT_ACCEL_REASON	TRACK	
N/A-AREAUQ			TI	ALTRKR ALTRKR1		i	SEC_ALT_ACCEL_REASON	TRACK	
c ARGaiQ	3.31	3.0-8	TSITEQ	OVAR2 OVAR1		T		TRACK	TTAUTOAQ/DR
c						r	OVERFLIGHTS.RANGE_IN		TTAUTOAQ
c						r	OVERFLIGHTS.RANGE_OUT		TTAUTOAQ
c						r	ARRIVALS.RANGE_IN		TTAUTOAQ
c						r	ARRIVALS.RANGE_OUT		TTAUTOAQ
c					r	AIRPORT_DEPTS(.i.).ARPT_DATA_SDY.INNER_RANGE_1			TTAUTOAQ
c					r	AIRPORT_DEPTS(.i.).ARPT_DATA_SDY.INNER_RANGE_2			TTAUTOAQ
c						r	OVERFLIGHTS.RANGE_START		TTAUTODR
c						r	OVERFLIGHTS.RANGE_STOP		TTAUTODR
c						r	DEPARTURES.RANGE_START		TTAUTODR
c						r	DEPARTURES.RANGE_STOP		TTAUTODR
c					r	AIRPORT_ARRS(.i.).RNG_AZIM_SDY.RANGE_START			TTAUTODR
c					r	AIRPORT_ARRS(.i.).RNG_AZIM_SDY.RANGE_STOP			TTAUTODR
c ABGLmiQ	3.31	3.0-8	TSITEQ	OA2OR2 OA3OB3 OA1OR1		T		TRACK	TTAUTOAQ
c					r	AIRPORT_DEPTS(.i.).ARPT_DATA_SDY.RANGE_2_INNER			TTAUTOAQ
c					r	AIRPORT_DEPTS(.i.).ARPT_DATA_SDY.RANGE_2_OUTER			TTAUTOAQ
c					r	AIRPORT_DEPTS(.i.).ARPT_DATA_PRIM.RANGE_3_INNER			TTAUTOAQ
c					r	AIRPORT_DEPTS(.i.).ARPT_DATA_PRIM.RANGE_3_OUTER			TTAUTOAQ
c ARRSNSiQ	3.82	3.0-30	DSITEQ	AQLRNGT		Ti	SENSOR_TYPE.SNSR_ARR_STATUS	IFT	TTSENSOR
N/A-ARTSiQ	3.11	3.0-2	DSITEQ	IDAT		TA	MYT_SOURCE_ID	IFT	
c ARTSIDQ	3.137	3.0-40	DSITEQ	IDAT		ebc	EBCDIC_SOURCE_ID	IFT	TKMISC
c ARTSIQ	3.10	3.0-2	DSITEQ	IDAT SDB2		A	MYTRAC_SOURCE_ID	IFT	TKMISC
N/A-ASLD	5.1.2	5.0-2							
N/A-ASOCT	2.169	2.0-37					CTS_REPS_SIZES_WORD_7	SPARM	
c ASQ	3.54.1	3.0-16	TI	COMA		i	PRE_ETA_FP_CHNG_STOR_DISPL	IFT	TKMISC
N/A-ASR7Q			TSITEQ			i	ASR_BEACON_SDBSYS	SPARM	
N/A-ASW7SQ			TSITEQ			i	ASR_ASSOC_DISPLAY_NO	SPARM	

M/A-ATHNGQ	3.130	3.0-39	MSITEQ	MTGA MTGCT SPARM		i	ADAPTED_TRAIN_DISP_FLAG	RTG	
C ATSQ	3.54.2	3.0-16	TI	COMA		i	PBE_FIX_ARIV_OVFL_TMPTOCTS	IPT	TKNISC
M/A-ATYPTIQ	7.5.2	7.0-43							
M/A-ATYPTLQ	7.5.1	7.0-43							
AUTO		3.5.2-2	SYSEQ0	AUT KOPC SDB2 SYSEQ1 SYSEQ2		boo	AUTO_OFFSET	PSRAP	
M/A-AUTTIMQ			TI	AUT		i	TIME_DELTA_AUTO_OFFSET	DISP	
C AVFBIQ	3.20	3.0-5	DSITEQ	VIALT		i	CODE_INFO.AVFB	SPARM	TTBCNBNK
C AVFBQQ	3.20	3.0-5	DSITEQ	VIALT		i	CODE_INFO	SPARM	TTBCNBNK
M/A-AVGDTQ			DSITEQ			i	AVG_DISP_DEAD_TIME	DISP	
M/A-AWDQ	2.117	2.0-21	TI	KOFA KOFB KOFC MTGA MTGCT	SDB2	i	MBUFF_TBPRET_AB_WORDS	KBD	
M/A-AZBINQ	3.110	3.0-34	TSITEQ	AZMBIN		TA	AZIM_BIN_ADDR	SPARM	
C BKQ	3.25	3.0-6	DSITEQ	CSBT PAIRT KYBDT BSCPNT MIPPT		TA	KYB_TYPE.BKQ	KBD	TTKEYBRD
C BABIQ	3.21	3.0-5	MSITEQ	TTASTO TASTO		c	INIT_ALTM		TKNISC
C BCNTQ	3.54.14	3.0-17	TSITEQ	KOFA KOFC		i	NO_SCAN_DISP_BEACON	TRACK	TKTRKPRM
M/A-BESG2Q	3.55.19	3.0-25							
M/A-BINBIASQ	2.120	2.0-26	TI			i	MTRK_BIN_BIAS	TRACK	
M/A-BLKS		3.5.2-2	SYSEQ0	CRIT KOFC MTP SDB2 SYSEQ1 SYSEQ2 TTYD		i	BULK_STORE_PP	SPARM	
C BOHTIQ	3.100	3.0-33	TSITEQ	BOMSHT		Ti	SENSOR_TYPE.BCON_NO_HIT_INIT	TRACK	TTSENSOR
C BOMSIQ	3.103	3.0-33	TSITEQ	BOMSHT		Ti	SENSOR_TYPE.BCON_NO_MISS_POR	TRACK	TTSENSOR
C BOTIQ	3.75	3.0-28	TSITEQ	ENDBOT BOTIT		Ti	SENSOR_TYPE.SIZE_BOT	TRACK	TTSENSOR
M/A-BOTMTQ	8.3.2	8.0-9	8.4.2	8.0-15					
M/A-BOUNDP	2.25	2.0-5							
C BOWLIQ	3.107	3.0-34	TSITEQ	BOSHFT		Ti	SENSOR_TYPE.BCON_SLIDE.WINDOW..	TRACK	TTSENSOR
M/A-BRP		3.5.2-2	SYSEQ0	SDB1,1RO SOBS SYSEQ1,2 TEXE TPUR TTYD		boo	BEACON_REPT_PROCESS	SPARM	
M/A-BRQ	2.110	2.0-19	TI			i	DBM_WD_PDB_TAB_BRIGHT	DISP	
M/A-BRSSQ	2.111	2.0-20	TI			i	DBM_SS_BRIGHT	DISP	
M/A-BRTNQ	3.119	3.0-37	TI			i	DBM_SZ_BRITE	DBM	
M/A-BSEG1Q	3.55.19	3.0-25	MSITEQ	CDAT MSAWQ SDB1RO		A	BEACON_SEG_LIMIT_1	MSAW	
M/A-BSEG2Q		3.0-25	MSITEQ	CDAT MSAWQ SDB1RO		A	BEACON_SEG_LIMIT_2	MSAW	
C CKQ	3.24	3.0-6	DSITEQ	QUIKT		TA	KYB_TYPE.CKQ	DISP	TTKEYBRD
M/A-CA Alarm	7.6	7.0-45							
M/A-CA Alarm	8.6	8.0-26							
M/A-CAALALT		3.5.2-2	SYSEQ0	SYSEQ1 SYSEQ2		i	CCD6494_CA_ZONE_SUPRESS	SPARM	
M/A-CADVQ	2.52	2.0-10							
M/A-CALALT			TI	CALTO COMS KOFB PAUS TCAS0		i	CTS_REFS_SIZES_WORD_42	SPARM	
M/A-CALALT			TI	TRAD TSUB0 TSUB1 TUD TUDCA		i	CTS_REFS_SIZES_WORD_42	SPARM	
M/A-CALL		3.5.2-2	SYSEQ0	ALTRKR ALTRKRT BRATS CDR	COMA	i	ON_CALL	SPARM	
M/A-CALL		3.5.2-2	SYSEQ0	CRIT CTIP DTOD FPDU	IPO	i		SPARM	
M/A-CALL		3.5.2-2	SYSEQ0	KIP KOFA KOFB KOFC	LIMD	i		SPARM	
M/A-CALL		3.5.2-2	SYSEQ0	MSAW MSITEQ MTGA PDOP	PSRAP	i		SPARM	
M/A-CALL		3.5.2-2	SYSEQ0	RDBMD RKIP SCDU SDB1	SDB1RO	i		SPARM	
M/A-CALL		3.5.2-2	SYSEQ0	SDB2 SLINK SWAPS SYSEQ1	SYSEQ2	i		SPARM	
M/A-CALL		3.5.2-2	SYSEQ0	TBDCBS TI TINIT TPREQ	TPSEC	i		SPARM	
M/A-CALL		3.5.2-2	SYSEQ0	TPUR TSO TSUB0 TSUB1	TTYD	i		SPARM	
M/A-CALRX			TI	TCAS0 TSUB0 TSUB1		i	CTS_REFS_SIZES_WORD_39	SPARM	
M/A-CALRY			TI	TCAS0 TSUB0 TSUB1		i	CTS_REFS_SIZES_WORD_40	SPARM	
M/A-CAPIJQ	3.96	3.0-32							
C CAPLIM							CAPLIM_SATQ_TRK_LIM	TRACK	TKTRKPRM
M/A-CASEIQ	3.140	3.0-41							
M/A-CATB	2.165	2.0-39					CTS_REFS_SIZES_WORD_28	SPARM	
M/A-CATB1	2.165	2.0-39					CTS_REFS_SIZES_WORD_33	SPARM	
M/A-CATC1	2.165	2.0-39					CTS_REFS_SIZES_WORD_29	SPARM	
M/A-CATC2	2.165	2.0-39					CTS_REFS_SIZES_WORD_30	SPARM	
M/A-CATC3	2.165	2.0-39					CTS_REFS_SIZES_WORD_31	SPARM	
M/A-CATC4	2.165	2.0-39					CTS_REFS_SIZES_WORD_32	SPARM	

N/A-CAYXDT			TI	TCAS0						i	CTS_REPS_SIZES_WORD_41	SPARM		
N/A-CAZONE		3.5.2-2	SYSEQ0	KOPB	MPRB	PDOP	SDB2	SYSE	Q1	i	CCD6499_SELECT	SPARM		
N/A-CAZONE		3.5.2-2	SYSEQ0	SYSEQ2	TTYD					i		SPARM		
c CBINQ	2.4	2.0-2	TI	TSUB0	TSUB1					r	MTRK_BLD_BINS_RDR	TRACK	TKTRKPRM	
N/A-CBUFSZ	2.141	2.0-32												
N/A-CBUF0	2.154	2.0-35												
N/A-CBUF1	2.154	2.0-35												
c CCNTQ	3.54.15	3.0-18	TSITEQ							i	NO_SCAN_UNSUCCESS_CORREL'TE	TRACK	TKTRKPRM	
N/A-CDCDBMAXQ	3.79	3.0-30	MSITEQ							i	LENGTH_CDR_CRIT_DATA	CRIT		
N/A-CDDTQ	2.147	2.0-33												
N/A-CDERQ	2.146	2.0-33												
N/A-CDIRQ	2.148	2.0-33												
N/A-CDLCQ	2.145	2.0-33												
N/A-CDLTQ	2.144	2.0-32												
N/A-CDR		3.5.2-1	SYSEQ0	ALTRKR	ALTRKB1	CDR	CDRD	CDRP		i	CONTINUOUS_DATA_RECORD	SPARM		
N/A-CDR		3.5.2-1	SYSEQ0	CONA	CRIT	CTIP	IFO	KOPA			CONTINUOUS_DATA_RECORD	SPARM		
N/A-CDR		3.5.2-1	SYSEQ0	KOPB	KOPC	MSAW	MTGA	MTGCT			CONTINUOUS_DATA_RECORD	SPARM		
N/A-CDR		3.5.2-1	SYSEQ0	PDOP	PSRAP	SDB2	SYSEQ1	SYSEQ2			CONTINUOUS_DATA_RECORD	SPARM		
N/A-CDR		3.5.2-1	SYSEQ0	TINIT	TPRED	TPSEC	TPUB	TSUB0			CONTINUOUS_DATA_RECORD	SPARM		
N/A-CDR		3.5.2-1	SYSEQ0	TSUB1	TTYD						CONTINUOUS_DATA_RECORD	SPARM		
N/A-CDRAIQ	3.114	3.0-35	MSITEQ	CDAPT						TA	CDR_ALT_FILTER	CDR		
N/A-CDRBijQ	3.115	3.0-35	MSITEQ	CDBPT	CDBP1T	CDBP2TC0	BP3T			Ti	CDR_BEACON_CODE_FILTER	CDR		
N/A-CDRCBFQ	2.142	2.0-32												
N/A-CDRDiQ	3.116	3.0-35	MSITEQ	CDDPT						Ti	CDR_DISP_FILTER	CDR		
N/A-CDRDKNQ	2.151	2.0-34												
N/A-CDRK1Q	2.150	2.0-34												
N/A-CDRRiFQ	3.117	3.0-36	MSITEQ	CDARPT						TA	CDR_RANGES_FILTER_SELECT	CDR		
N/A-CDRSAFQ	2.149	2.0-34												
N/A-CDRSATQ	2.149	2.0-34												
N/A-CDRSBTQ	2.149	2.0-33												
N/A-CDRSCTQ	2.149	2.0-34												
N/A-CDRSIPQ	2.149	2.0-34												
N/A-CDRSKPQ	2.149	2.0-34												
N/A-CDRSMAQ	2.149	2.0-34												
N/A-CDRSMDQ	2.149	2.0-34												
N/A-CDRSRBQ	2.149	2.0-34												
N/A-CDRSRTQ	2.149	2.0-33												
N/A-CDRSTDQ	2.149	2.0-34												
N/A-CDRziFQ	3.118	3.0-36	MSITEQ	CDARPT						TA	CDR_AZIMUTHS_FILTER_SELECT	CDR		
N/A-CDTIQ	8.6.1	8.0-26												
N/A-CEPQ	8.4.3	8.0-16												
N/A-CFGLGTH	3.79	3.0-29	MSITEQ	CRIT	CRITD					i	CRIT_LENGTH_CONFIG_TABLES	CRIT		
c CFGNOQ	3.41	3.0-12	MSITEQ	MSMOVE	KOPC	MSAWQ	MSAW2Q	MSAW3Q	MSAW4Q	i	NO_CONF_TABLE	SPARM	TKMISC	
c CFG1Q	3.41	3.0-12	MSITEQ	CPGT						i	NO_ITEMS_WORDS_CONF_TABLE	SPARM	TKMISC	
c CFG2Q	3.41	3.0-12	MSITEQ	CPGT						i	NO_ITEMS_STR_CONF_TABLE	SPARM	TKMISC	
N/A-CFIRMQ	2.5	2.0-2	TI							abc	MTRK_FIRM_SPEED_CAL	TRACK		
N/A-CFLGT	2.165	2.0-37									CTS_REPS_SIZES_WORD_9	SPARM		
N/A-CGTPDQ	2.44	2.0-8												
N/A-CHPQ	8.4.4	8.0-16												
N/A-CKEYQ	2.152	2.0-35										CDR		
N/A-CLUTALTQ			MSITEQ	CLUTALT							ALT_3600_IN_BCD	DISP	TKMISC	
N/A-CLUTDISPQ	3.141	3.0-41	DSITEQ	CLUTDISP								DISP		
N/A-CLUTDISP1Q			DSITEQ	CLUTDISP							2ND_TGA_TOWER_LOCAL_DISPLAY	DISP		
N/A-CLUTDISTQ			MSITEQ	CLUTDIST							DISTANCE_SQUARE	DISP	TKMISC	
N/A-CLUTNUMDQ			DSITEQ	CLUTDISP	CLUTDKYB						NO_DISPLAYS_ADAPTED	DISP		

```
N/A-CLUTRKYBQ  3.142    3.0-41  DSITEQ  CLUTRKYB                                                                    DISP
N/A-CLUTRKYBIQ                  DSITEQ  CLUTRKYB                                                                    2ND_LGA_TOWER_LOCAL_DISP_ASOC_KYB
N/A-CLUTXPOSIQ                  MSITEQ  CLUTXPOS,pos1,pos2,pos3                                  Ti  LGA_CLUTTER_X_POS_SENSOR    DISP    TKMISC
N/A-CLUTYPOSIQ                  MSITEQ  CLUTYPOS,pos1,pos2,pos3                                  Ti  LGA_CLUTTER_Y_POS_SENSOR    DISP    TKMISC
N/A-CNMISQ     3.79     3.0-30  MSITEQ  SPARM   CRIT     CRITD                                   i   CRIT_NO_MISC_WORDS          CRIT
N/A-CNTDNQ     3.54.5   3.0-17  MSITEQ  SPARM   KOPA                                             i   NO_SCAN_AFTER_HANDOFF       DISP
N/A-CNTDNQd                     MSITEQ  IFI     SDB1RO                                           i   HANDOFF_COUNTDOWN_MONITOR   SPARM
c   COAST                       SDB1                                                             i   CST_MAX_SCANS_UNASSOC_BEACON    TRACK   TKTRKPRM
c   COAST                       SDB1                                                             i   CST_MAX_SCANS_ASSOC_BEACON  TRACK   TKTRKPRM
c   COAST                       SDB1                                                             i   UNASC_BDR_COAST_MAX_SCANS   TRACK   TKTRKPRM
c   COAST                       SDB1                                                             i   ASC_BDR_COAST_MAX_SCANS     TRACK   TKTRKPRM
N/A-CONnQ      3.14     3.0-3   DSITEQ  IDAT                                                     TA  ARTCC_CONTROL_ID          IFY
N/A-CONLMQ     3.23     3.0-5   DSITEQ                                                           A   MYT_CNTRLR_LPOS             SPARM
N/A-COS A      7.2.1.11 7.0-26
N/A-COS B      7.2.1.12 7.0-27
N/A-CQ         3.41     3.0-12                                                                   NO_OF_CONFIGURATIONS
N/A-CRIT                        SYSEQ0  CRIT CRIDT SDB2     SYSEQ1   SYSEQ2                  boo CRITICAL_DATA_COLLECT       SPARM
N/A-CRITTIME   3.79     3.0-29  MSITEQ  CRIT                                                     i   CRIT_SECONDS_SCALED         CRIT
N/A-CROSSQ     8.5.3    8.0-22
c   CSPEEDQ    2.6      2.0-2   TI      TSUB0  TSUB1                                             r   NTRK_VELOC_COMP_LIMIT       TRACK   TKTRKPRM
N/A-CSTNQ      3.119    3.0-37  TI                                                               i   DBM_SZ_COAST_TAB_LINES      DBM
N/A-CTSQ       2.165    2.0-39  TI      CDR     KOPC     SDB1RO                                  i   CTS_WORDS_PER_TRK           SPARM
N/A-CTSST      2.165    2.0-38                                                                   CTS_REPS_SIZES_WORD_17      SPARM
N/A-CTST       2.165    2.0-37                                                                   CTS_REPS_SIZES_WORD_1       SPARM
N/A-CWAITQ     3.79     3.0-29  MSITEQ  CRIT                                                     i   CRIT_WAIT_FACTOR_TO_RECORD  CRIT
N/A-CYCLE      5.2.5    5.0-9
N/A-C1xxQ      3.41     3.0-12          CFGN1T  CFGN2T
N/A-C2xxQ      3.41     3.0-12  CSITEQ  CFGS2T  CFGS1T                                           TA  CONF_ITEM
N/A-C3, C4     7.1.1.5  7.0-4
c   DDQ        3.28     3.0-7   DSITEQ FLAGT QLRECT QLRC2T QLRC3T TKRCXT DCONT                   TA  DISPLAY_CONFIG_TYPE.DDQ  DISP    TTDISPCM
N/A-DADBLQ     2.122    2.0-23  MSITEQ  COMC    TRAD                                             i   DBM_ADB_LENGTH          SPARM
N/A-DADBQ      2.122    2.0-23  MSITEQ  COMC    MPEB     SDB2     TRAD                           i   DBM_ALT_DB              SPARM
N/A-DALT       2.165    2.0-39
   DAZmiQ      3.34     3.0-10  TSITEQ  AZ2RG2  AZ1RG1                    Tf AIRPORT_ARRS(.i.).RNG_AZIM_PRIM.AZIM_END TRACK   TTAUTODB
N/A-DBLO       5.1.6    5.0-6
N/A-DBMEND     2.122    2.0-24  MSITEQ                                                           i   LAST_DBM_ADDR           SPARM
N/A-DBMSZQ     2.122    2.0-21  MSITEQ  NUMBCWS  MPSTACK
N/A-DBRiTQ                      MSITEQ  BRDBMA                                                   Ti  MSAW_DBM_ADDR_BRITE     MSAW
N/A-DBRiVQ                      MSITEQ  BRDBMA                                                   Ti  MSAW_DBM_ADDR_VECTOR    MSAW
N/A-DBRSQ      2.122    2.0-22  TI      MSITEQ                                                   i   DSPSZ_TM_BR             DISP
N/A-DBR1Q      2.122    2.0-24  MSITEQ  COMB    SDB2                                             i   BRITE_LIST_1            SPARM
N/A-DBR2Q      2.122    2.0-24  MSITEQ  COMB    SDB2                                             i   BRITE_LIST_2            SPARM
N/A-DBUG                3.5.2-2 SYSEQ0  SYSEQ1  SYSEQ2   SYSPAB                                  i   DEBUG_AIDS              SPARM
N/A-DCAIQ                       MSITEQ  KOPB    PDOP     SDB2                                    i   CONTROLLER_INHIBIT      SPARM
N/A-DCAPQ      2.143    2.0-32
c   DCMK                        MSITEQ                                                           i   DISP_CARMEL             DISP    TKDISPID
N/A-DCSiQ      2.122    2.0-23  MSITEQ  SDB2 TDOP  KOPC MPEB RCOMR RDBMD RTDOP                  Ti  KYB_COAST_SUSPEND       SPARM
N/A-DCSSQ      2.122    2.0-21  Tf      MSITEQ   RTDOP                                           i   DSPSZ_TM_CS             DISP
c   DDMT1                       MSITEQ                                                           i   DISP_MAINT_1            DISP    TKDISPID
c   DDMT2                       MSITEQ                                                           i   DISP_MAINT_2            DISP    TKDISPID
c   DDSS                        MSITEQ                                                           i   DISP_DSS_PHASE_1        DISP    TKDISPID
c   DDSS2                       MSITEQ                                                           i   DISP_DSS_PHASE_2        DISP    TKDISPID
N/A-DEDRNUM    2.153    2.0-35
N/A-DEMQ                2.0-22  MSITEQ  PDOP  RCOMR RDBMD  SDB2                                  i   EM_BF_MJ_SA             SPARM
N/A-DEMQ       2.122    2.0-22
```

c	DESAR			MSITEQ		i	DISP_EWR_SAT_ARR_RAD	DISP	TKDISPID
c	DESDR			MSITEQ		i	DISP_EWR_SAT_DEPT_RAD	DISP	TKDISPID
c	DEWRD			MSITEQ		i	DISP_EWR_DEPT_RAD	DISP	TKDISPID
c	DEWRF			MSITEQ		i	DISP_EWR_FINAL_VECTOR	DISP	TKDISPID
c	DEWRL			MSITEQ		i	DISP_EWR_TOWER_LOC_CONTROL	DISP	TKDISPID
c	DEWRM			MSITEQ		i	DISP_EWR_MAINT	DISP	TKDISPID
c	DEWRS			MSITEQ		i	DISP_EWR_SAT	DISP	TKDISPID
c	DEWRT			MSITEQ		i	DISP_EWR_TOWER_TCA	DISP	TKDISPID
N/A-	DFDBLQ	2.122	2.0-23	MSITEQ	COMC LINO MPEB SDB2 TRAD	i	DBM_FDB_LENGTH	SPARM	
N/A-	DFDBQ	2.122	2.0-23	MSITEQ	COMC LINO MPEB SDB2 TRAD	i	DBM_FULL_DB (DATA_BLOCK)	SPARM	
c	DHPNA			MSITEQ		i	DISP_HPN_ARR_RAD	DISP	TKDISPID
c	DHPND			MSITEQ		i	DISP_HPN_DEPT_RAD	DISP	TKDISPID
c	DHPNL			MSITEQ		i	DISP_HPN_TOWER_LOC_CONTROL	DISP	TKDISPID
c	DHPNM			MSITEQ		i	DISP_HPN_MAINT	DISP	TKDISPID
c	DILSR			MSITEQ		i	DISP_JFK_ILS_MONITOR	DISP	TKDISPID
N/A-	DISLGTFQ	3.79	3.0-29	MSITEQ	CRITD	i	CRIT_LNGTH_DISP_TABLES	CRIT	
N/A-	DISLGTH	3.79	3.0-29	MSITEQ	CRITD	i	FULL_CRIT_LNGTH_DISP_TABLES	CRIT	
c	DISPE			MSITEQ		i	DISP_ISP_EAST	DISP	TKDISPID
c	DISPI			MSITEQ		i	DISP_ISP_BDR_HVN	DISP	TKDISPID
c	DISPL			MSITEQ		i	DISP_ISP_TOWER_LOC_CONTROL	DISP	TKDISPID
c	DISPM			MSITEQ		i	DISP_ISP_MAINT	DISP	TKDISPID
c	DISPN			MSITEQ		i	DISP_ISP_NORTH	DISP	TKDISPID
c	DISPW			MSITEQ		i	DISP_ISP_WEST	DISP	TKDISPID
c	DISQ	2.126	2.0-26	TI	TINIT TPUB	i	ALLOW_DIST_BTWN_TARG_TRK	TRACK	TKTRKPRM
N/A-	DISWORDS	3.79	3.0-29	MSITEQ		i	CRIT_NO_DISP_TABLES	CRIT	
c	DIS2Q	3.45	3.0-14	TSITEQ		i	MAX_DIFF_XYCOORD_ACQU_SUSP_T	TRACK	TKTRKPRM
c	DJFKD			MSITEQ		i	DISP_JFK_DEPT_RAD	DISP	TKDISPID
c	DJFKF			MSITEQ		i	DISP_JFK_FINAL_VECTOR	DISP	TKDISPID
c	DJFKL			MSITEQ		i	DISP_JFK_TOWER_LOC_CONTROL	DISP	TKDISPID
c	DJFKM			MSITEQ		i	DISP_JFK_MAINT	DISP	TKDISPID
c	DJFKT			MSITEQ		i	DISP_JFK_TOWER_TCA	DISP	TKDISPID
c	DLGAB1			MSITEQ		i	DISP_LGA_TOWER_LOC_CONTROL	DISP	TKDISPID
c	DLGAB2			MSITEQ		i	DISP_LGA_TOWER_TCA	DISP	TKDISPID
c	DLGAD			MSITEQ		i	DISP_LGA_DEPT_RAD	DISP	TKDISPID
c	DLGAF			MSITEQ		i	DISP_LGA_FINAL_VECTOR	DISP	TKDISPID
N/A-	DMDAQ			MSITEQ	SDB2 COMB KOPB KOPC MPEB RDBMD	i		SPARM	
N/A-	DMDBLQ	2.122	2.0-24	MSITEQ	COMC TRAD	i	DBM_MSAW_DB_LENGTH	SPARM	
N/A-	DMDBQ	2.122	2.0-24	MSITEQ	COMC MPEB SDB2 TRAD	i	DBM_MSAW_DB	SPARM	
c	DMIC			MSITEQ		i	DISP_MICRO	DISP	TKDISPID
N/A-	DMRQ	2.122	2.0-22	MSITEQ	PDOP BDBMD BDOP SDB2	i	MEMORY_READOUT	SPARM	
N/A-	DMRSQ	2.122	2.0-22	TI	MSITEQ	i	DSPSZ_TM_MEM_READ	DISP	
c	DNER			MSITEQ		i	DISP_NE_RAMP	DISP	TKDISPID
c	DNWR			MSITEQ		i	DISP_NW_RAMP	DISP	TKDISPID
N/A-	DPBITS			MSITEQ	KIPM	i	DISPLAY_BITS_ENCODED_WD	DISP	
N/A-	DPBITS	3.78	3.0-29						
N/A-	DPBITS1	3.78	3.0-29	MSITEQ	KIPM	i	DISPLAY_BITS_ENCODE_WD_1	DISP	
c	DPDTIQ	3.54.8	3.0-17	MSITEQ	COMA MAT	i	PTD_INCREMENT_FOR_ACID	SPARM	TKMISC
c	DPDTIQX	3.54.9	3.0-17	MSITEQ		i	PTD_INCREMENT_ROLLOVER_CLOCK	SPARM	TKMISC
N/A-	DPRIQ	2.122	2.0-23	MSITEQ	KOPA KOPB KOPC MPEB MTGA MTGCT SDB2	TI	KYB_READOUT_PREVIEW	SPARM	
N/A-	DPRNCQ	2.176	2.0-42	TI	RDBSQ	i	NUM_RDBM_PREVIEW_CHARS	DISP	
N/A-	DPROFFQ	2.176	2.0-42	TI	RDBMD	i	RDBM_PREVIEW_CHARS_OFFSET_WORDS	DISP	
N/A-	DPRSQ	3.119	3.0-36	TI	MSITEQ	i	DBM_SZ_AR_REDUND_WORDS	DBM	
N/A-	DPSTQ	2.122	2.0-22	MSITEQ	DOP MPEB BCOMR RDBMD	i	PSTACK_ADDRESS	SPARM	
c	DRBV			MSITEQ		i	DISP_RBV_ARR_RAD	DISP	TKDISPID
	DRGmIQ	3.34	3.0-10	TSITEQ	AZ2BG2 AZ1BG1	TI	AIRPORT_ARRS(.1).RNG_AZIM_PRIM.RANGE_END	TRACK	TTAUTODB

DBGUNQ	3.54.12	3.0-17	TSITEQ	DARG	Ti	UNKNOWN_ARR	DISP	TTAUTODR
N/A-DSAQ	2.122	2.0-22	HSITEQ	KOPC MPEB BCOMB RDBMD SDB2	i	SYSTEM_AND_B_WDS	SPARM	
C DSAI			HSITEQ		i	DISP_SATES_ELLIS	DISP	TKDISPID
N/A-DSCUDTQ	2.122	2.0-22	HSITEQ	MPEB	i	SELECTED_CODES	SPARM	
N/A-DSFQ	2.122	2.0-22	HSITEQ	MPSTACK				
N/A-DSKHQ	2.100	2.0-18	TI	KOPC	i	DISC_ALLOC_MAX_DRIVE	SPARM	
N/A-DSLVQ	2.122	2.0-22	HSITEQ		i	SYSTEM_LEVEL	SPARM	
C DSMA			HSITEQ		i	DISP_SNA_ARR_RAD	DISP	TKDISPID
N/A-DSORQ	2.122	2.0-24	HSITEQ	MPEB BCOMB RDBMD SDB2	i	START_BRFRESH_WD	SPARM	
N/A-DSPKYQ	3.77.1	3.0-28	HSITEQ	DSPKY				
C DSQ	3.54.2	3.0-16	TI	COMA	i	PRE_PTD_FP_CHNG_STOR_DISPL	IFY	TKMISC
N/A-DSSLQ	2.122	2.0-24	HSITEQ	COMC TRAD	i	DBM_SS_LENGTH	SPARM	
N/A-DSSQ	2.122	2.0-24	HSITEQ	COMC MPEB RDBMD SDB2 TRAD	i	DBM_SINGLE_SYMBOLS	SPARM	
N/A-DSTIQ	2.122	2.0-23	HSITEQ	KOPC MPEB RCOMB RDBMD HTDOP SDB2 TDOP	Ti	KYB_STORE_TBACKS	SPARM	
N/A-DSTAGQ			HSITEQ	MPEB SDB2	i	PRF_STAGGER_SUBLIST	SPARM	
N/A-DSTSQ	2.122	2.0-22	TI	HSITEQ HTDOP	i	DSPSZ_TM_ST	DISP	
C DSWD			HSITEQ		i	DISP_SW_DEPART	DISP	TKDISPID
C DSWE			HSITEQ		i	DISP_SWEET_ROBINSVILLE	DISP	TKDISPID
C DSWR			HSITEQ		i	DISP_SW_RAMP	DISP	TKDISPID
N/A-DTADQ	2.104	2.0-18	TI	DTK2				
N/A-DTBQ	2.122	2.0-24	HSITEQ	IFO KIP MPEB BCOMB RDBM SDB2	i	TRACK_BALLS	SPARM	
N/A-DTESTQ	2.122	2.0-24	HSITEQ	PDOP SDB2	i	TEST_TARGET	SPARM	
N/A-DTFDQ	2.105	2.0-19	TI	DTK4				
N/A-DTGQ	2.122	2.0-24	HSITEQ	HTGA HTGCT SDB2	i	TARGET_GEN_TRACKS	SPARM	
N/A-DTGSZQ	2.122	2.0-22	TI	HSITEQ	i	DSPSZ_TM_TG_SIZE	DISP	
N/A-DTINQ	2.122	2.0-22	HSITEQ	KOPC HTGA HTGCT PDOP	i	SYSTEM_TIME	SPARM	
N/A-DTMDQ	2.106	2.0-19	TI	DTK3				
C DTSQ	3.54.2	3.0-16	TI	COMA	i	PRE_PTD_DEPPLT_TEMP_TO_CTS	IFY	TKMISC
C DITDOTJ	3.94	3.0-32	TSITEQ	DELTYDOT	i	I_FIL_MAX_VELOCITY_BDR_ONLY	DISP	TKTRKPRM
N/A-DZINQ	8.2.2	8.0-1						
N/A-EDIS	7.2.1.9	7.0-23						
N/A-EDIU	7.2.1.10	7.0-24						
N/A-EDOS	7.1.1.14	7.0-11						
N/A-EDOS	7.2.1.13	7.0-28						
N/A-EDOS	7.3.1.13	7.0-35						
N/A-EDOU	7.2.1.14	7.0-29						
N/A-EDOU	7.3.1.14	7.0-36						
N/A-EDOW	7.1.1.15	7.0-12						
N/A-ELOUUTQ			HSITEQ	ELDDDT		TIME_BTWN_DATA_LOSS_MSGS		
C EMBQ	2.123	2.0-24	TI	COMA COMB PSRAP TSUB0 TSUB1	ebc	EMGNCY_BEACON_CODE_ALLOC	SPARM	TKMISC
N/A-EMCTQ	2.123	2.0-25	TI	COMB	i	EMGNCY_COUNTDOWN_CODE	SPARM	
N/A-END	5.1.7	5.0-7						
C EQTYQ	3.50	3.0-15	HSITEQ	COMA KOPA KOPC SCTSE	b	AIRCRAFT_TYPE_DISP	DISP	TKMISC
N/A-ES	7.1.1.14	7.0-11	7.2.1.13	7.0-28 7.3.1.13 7.0-35				
C EWB	3.124	3.0-37	HSITEQ	TEXEC	i	SNSR_1_EWB	TRACK	TKAPTID
N/A-EWBnIi	7.4.1	7.0-41	7.4.2	7.0-42				
C EWRA			HSITEQ		i	EWB_ARR_AIRPORT_V	TRACK	TKAPTID
C EWRD			HSITEQ		i	EWB_DEPT_AIRPORT_V	TRACK	TKAPTID
N/A-EZULOQ	2.155	2.0-35	TI	CRIT KOPC	i	TIME_EXEC_STORE_LOC_ZULU	SPARM	
C Faaa	3.138	3.0-40			TA	CONF_FIX		TKFIXID
N/A-FBDTQ			TI		i	TMSHR_DT_FBD_PARM	DISP	
N/A-FDBNQ	3.119	3.0-36	HSITEQ		i	NO_FULL_DB	DBM	
N/A-FDIG		3.5.2-1	SYSEQ0	SYSEQ1 SYSEQ2	i	FULL_DIGITAL_DISP	SPARM	
C FIFRQ	3.20	3.0-4	DSITEQ	VICDT VICIIT	ebc	FIRST_IFR_CODE	IFY	TTBCNBNK
N/A-FILT	2.165	2.0-38						

M/A-FILIT	2.165	2.0-38									
C FIRMT			SDB1BO						Ti	FIRMNESS_TABLE	TRACK	TTFIRM
M/A-FIRMTQ	8.5.5	8.0-23									
M/A-FIRM1Q	2.126	2.0-26	TI						i	MTRK_FIRM_1	TRACK	
M/A-FIRM1Q	8.5.4	8.0-22	TI						i	MTRK_FIRM_1	TRACK	
C FIRM2Q	2.126	2.0-26	TI	TPUR					ebc	TPUR_FIRMNESS	TRACK	TKTRKPRM
C FIXQ	3.43	3.0-13	DSITEQ	FIXCVT					Ti	SS_FIX_TIME	IFY	TTSSAFIX
C FIXCNQ	3.43	3.0-13	DSITEQ	FIXCVT					i	NO_FIX_DEFIN_M_AIRPT	IFY	TKRANGE
C FLUSQ	3.54.6	3.0-17	MSITEQ	KOFC					i	MANUAL_STORE_TRK_STOP_TIME	TRACK	TKMISC
C FLDRQ	2.161	2.0-36	TI	COMA	COMB				ebc	MTRK_SCANS_BDR_FLASH	TRACK	TKTRKPRM
C FVFRIQ	3.20	3.0-5	DSITEQ	VICDT	VICIXT				Ti	CODE_INFO.FVFR	IFY	TTBCMSME
C FVFRQ	3.20	3.0-4	DSITEQ	VICDT	VICIXT				i	CODE_INFO	IFY	TTBCMSME
M/A-GAMMQ	2.40	2.0-8										
M/A-GBALTQ	3.55.20	3.0-25										
M/A-GLALTQ	3.55.20	3.0-25										
M/A-GTAIJQ	3.55.10	3.0-22a										
M/A-GTALIQ	3.55.10	3.0-22a										
M/A-GTRIJQ	3.55.10	3.0-22a										
M/A-HDEVQ	2.33	2.0-6										
M/A-HIGHQ	3.55.18	3.0-25										
C HJBQ	2.123	2.0-25	TI	COMA	COMB	PSRAP	TSUBQ	TSUB1	ebc	HIJACK_BEACON_CODE_ALLOC	SPARM	TKMISC
M/A-HJCTQ	2.123	2.0-25	TI	COMB					ebc	HIJACK_COUNTDOWN_CODE	SPARM	
C HPN	3.124	3.0-37	MSITEQ	TEXEC					i	SNSR_3_IPN	TRACK	TKAPTID
C HPNA			MSITEQ						i	HPN_ARR_AIRPORT_X	TRACK	TKAPTID
C HPND			MSITEQ						i	HPN_DEPT_AIRPORT_X	TRACK	TKAPTID
C HTBQ	3.121	3.0-37	MSITEQ	KOFA	RCOMB	BDBMD			i	HOME_TRK_X	SPARM	TKMISC
C HTBQ	3.121	3.0-37	MSITEQ	KOFA	BCOMB	BDBMD			i	HOME_TRK_Y	SPARM	TKMISC
C IAAEQ	3.44	3.0-14	TSITEQ	IFI					i	IFY_AUTO_ACQB_ENABLE	IFY	TKTRKPRM
M/A-IAIQ	3.16	3.0-3	MSITEQ	IDAT					i	IFY_ACK_TIMEOUT_INTERVAL	IFY	
M/A-ICAPMQ	2.45	2.0-8										
M/A-ICGTMQ	2.47	2.0-9										
M/A-ICHA	2.167	2.0-40	TI	IDAT	IFI	IFO			i	CMC_IFY_RECEIVE	IFY	
M/A-ICTA	2.167	2.0-40	TI	IDAT	IFI	IFO			i	CMC_IFY_TRANSMIT	IFY	
M/A-IENT	5.1.5.1	5.0-5										
M/A-IFQ	3.7	3.0-2	MSITEQ	INIFC					enum	ARTCC_CAPABILITY	IFY	
M/A-IFREFQ	7.6.1	7.0-45										
M/A-IFXMQ	2.39	2.0-4	TI	IDAT					i	IFL_SECONDS_SCALED_0	IFY	
M/A-IITSQ	2.156	2.0-35	TI	IDAT	IFI				i	IFL_INTRPT_STAT_TBL_SIZE	IFY	
M/A-ILPQ	8.4.5	8.0-17										
M/A-IMMEFQ	3.15	3.0-3	MSITEQ	IFO					i	IFY_MSG_EXCHANGE_FMEQ	IFY	
M/A-INHBQ	2.159	2.0-36	TI						b	DBM_NO_FDB_MSAW_INHIBIT	DISP	
M/A-INIBQ	2.54	2.0-10										
M/A-INITRQ	3.134	3.0-40	DSITEQ	RCOMB	BDBMD	BDOP			b	INIT_RDBM_RANGE_FILTER	RDBM	
M/A-INPBQ	2.157	2.0-35	TE	IDAT	IFI	TTYD			i	IFL_NO_INPBINT_BUFFERS	IFY	
M/A-INTBCNQ			TI						b	AUT_INT_BEACON	TRACK	
M/A-INTRADQ			TI						i	AUT_INT_RADAR	TRACK	
M/A-IOPPQ	3.125	3.0-38										
M/A-IOP1Q	3.125	3.0-38										
M/A-IOP2Q	3.125	3.0-38										
M/A-IPAPMQ	2.46	2.0-9										
M/A-IPGTMQ	2.48	2.0-9										
M/A-IPJGTMQ	2.49	2.0-9										
C ISP	3.124	3.0-37	MSITEQ	TEXEC					i	SNSR_2_ISP	TRACK	TKAPTID
C ISPA			MSITEQ						i	ISP_ARR_AIRPORT_M	TRACK	TKAPTID
C ISPD			MSITEQ						i	ISP_DEPT_AIRPORT_M	TRACK	TKAPTID

```
M/A-ITESTQ   SYSEQ0     3.5.2-1  DAT IPI IFO BDBMD SDB2  SYSEQ1 SYSEQ2 TTYD    i   IFY_TEST_PROGR                SPARM
M/A-ITBQ       2.20     2.0-4    TI      IPI                                    i   IFL_DX_RETRNSMIT_PARM         IFY
M/A-IFUIQ      3.53     3.0-15   DSITEQ  IDAT                                   i   IFY_TRK_UPDATE_TIMEOUT        IFY
M/A-JGCTHQ              3.0-37   TI      ALTBKR ALTBKR1                         i   JUMP_THRESHOLD                TRACK
c   JFK        3.124    3.0-37   MSITEQ  TEXEC                                  i   SNSR_0_JFK                    TRACK    TKAPTID
c   JFKA                3.0-37   MSITEQ                                         i   JFK_ARR_AIRPORT_0             TRACK    TKAPTID
c   JFKD                3.0-37   MSITEQ                                         i   JFK_DEPT_AIRPORT_0            TRACK    TKAPTID
c   KKQ        3.26     3.0-6    DSITEQ  SYMT  PAINT                           TA  KYB_TYPE.KYB_DD_TYPE          KBD      TTKEYBRD
M/A-KCMQ       2.124    2.0-25   TI      IFO KIP                                i   KIP_INT_PRE_CHANNEL_SWITCH    KBD
c   KCMK                3.0-25   MSITEQ                                         i   KYB_CARNEL                    KBD      TKKYBID
c   KCMKH               3.0-25   MSITEQ                                         i   KYB_CARNEL_HO                 KBD      TKKYBID
c   KDISHTij            3.0-25   MSITEQ                                         Ti  MAINT_KYB_DISP                KBD      TKDISKYB
c   KDSS                3.0-25   MSITEQ                                         i   KYB_DSS_PHASE_1               KBD      TKDISKYB
c   KDSS2               3.0-25   MSITEQ                                         i   KYB_DSS_PHASE_2               KBD      TKDISKYB
M/A-KEDQ       2.124    2.0-25   TI                                             i   KIP_BAD_OUT_PAR_INTRUP        KBD
c   KELL                3.0-25   MSITEQ                                         i   KYB_ELLIS                     KBD      TKKYBID
M/A-KENTQ      2.124    2.0-25   TI                                             i   KIP_TIME_BTWN_ED_EE           KBD
c   KESAR               3.0-25   MSITEQ                                         i   KYB_EWR_SAT_ARR_RAD           KBD      TKKYBID
c   KESARH              3.0-25   MSITEQ                                         i   ARR_RAD_HO_KYB_EWR_SAT        KBD      TKKYBID
c   KESDR               3.0-25   MSITEQ                                         i   KYB_EWR_SAT_DEPT_RAD          KBD      TKKYBID
c   KESDRH              3.0-25   MSITEQ                                         i   DEPT_RAD_HO_SAT_EWR_KYB       KBD      TKKYBID
c   KEWRD               3.0-25   MSITEQ                                         i   KYB_EWR_DEPT_RAD              KBD      TKKYBID
c   KEWRDH              3.0-25   MSITEQ                                         i   DEPT_RAD_HO_EWR_KYB           KBD      TKKYBID
c   KEWRF               3.0-25   MSITEQ                                         i   KYB_EWR_FINAL_VECTOR          KBD      TKDISKYB
c   KEWRFH              3.0-25   MSITEQ                                         i   FINAL_VECTOR_HO_KYB_EWR       KBD      TKDISKYB
c   KEWRLCL             3.0-25   MSITEQ                                         i   KYB_EWR_TOWER_LOCAL           KBD      TKDISKYB
c   KEWRM               3.0-25   MSITEQ                                         i   KYB_EWR_MAINT                 KBD      TKDISKYB
c   KEWRSI              3.0-25   MSITEQ                                         Ti  KYB_EWR_SAT_1                 KBD      TKDISKYB
c   KEWRTCA             3.0-25   MSITEQ                                         i   KYB_EWR_TOWER_TCA             KBD      TKDISKYB
M/A-KEYLGTPJ   3.79     3.0-29   MSITEQ  CRITD                                  i   PULLUP_LNGTH_KYB_TABLES       CRIT
M/A-KEYLGTH    3.79     3.0-29   MSITEQ  CRIT                                   i   CRIT_LNGTH_KEY_TABLES         CRIT
M/A-KEYWORDS   3.79     3.0-29   MSITEQ  CRIT                                   i   CRIT_NO_KYB_TABLES            CRIT
c   KHPMA               3.0-29   MSITEQ                                         i   KYB_HPM_ARR_RAD               KBD      TKKYBID
c   KHPMD               3.0-29   MSITEQ                                         i   KYB_HPM_DEPT_RAD              KBD      TKKYBID
c   KHPMDH              3.0-29   MSITEQ                                         i   KYB_HPM_ARR_DEPT_HO           KBD      TKKYBID
c   KHPMLCL             3.0-29   MSITEQ                                         i   KYB_HPM_TOWER_LOCAL           KBD      TKDISKYB
c   KHPMM               3.0-29   MSITEQ                                         i   KYB_HPM_MAINT                 KBD      TKDISKYB
M/A-KICQ       2.124    2.0-25   TI      DOP IFO      KIP      SDB2             i   KIP_INT_STATUS_TABLE_SIZE     KBD
c   KILSM1              3.0-25   MSITEQ                                         i   KYB_MONITOR_1_JFK_ILS         KBD      TKDISKYB
c   KILSM3              3.0-25   MSITEQ                                         i   KYB_MONITOR_3_JFK_ILS         KBD      TKDISKYB
M/A-KIPKYQ     3.77.1   3.0-28   MSITEQ  KIPKY
c   KISPE               3.0-28   MSITEQ                                         i   KYB_ISP_EAST                  KBD      TKKYBID
c   KISPEH              3.0-28   MSITEQ                                         i   KYB_ISP_EAST_HO               KBD      TKKYBID
c   KISPI               3.0-28   MSITEQ                                         i   KYB_ISP_BDR_HVM               KBD      TKKYBID
c   KISPIH              3.0-28   MSITEQ                                         i   KYB_ISP_BDR_HVM_HO            KBD      TKKYBID
c   KISPLCL             3.0-28   MSITEQ                                         i   KYB_ISP_TOWER_LOCAL           KBD      TKDISKYB
c   KISPM               3.0-28   MSITEQ                                         i   KYB_ISP_MAINT                 KBD      TKDISKYB
c   KISPN               3.0-28   MSITEQ                                         i   KYB_ISP_NORTH                 KBD      TKKYBID
c   KISPNH              3.0-28   MSITEQ                                         i   KYB_ISP_NORTH_HO              KBD      TKKYBID
c   KISPW               3.0-28   MSITEQ                                         i   KYB_ISP_WEST                  KBD      TKKYBID
c   KISPWH              3.0-28   MSITEQ                                         i   KYB_ISP_WEST_HO               KBD      TKKYBID
c   KJFKD               3.0-28   MSITEQ                                         i   KYB_JFK_DEPT_RAD              KBD      TKKYBID
c   KJFKDH              3.0-28   MSITEQ                                         i   KYB_JFK_DEPT_RAD_HO           KBD      TKKYBID
c   KJFKF               3.0-28   MSITEQ                                         i   KYB_JFK_FINAL_VECTOR          KBD      TKDISKYB
c   KJFKLCL             3.0-28   MSITEQ                                         i   KYB_JFK_TOWER_LOCAL           KBD      TKDISKYB
```

C	KJFKM			MSITEQ				i	KYB_JFK_MAINT	KBD	TKDISKYB
C	KJFKTCA			MSITEQ				i	KYB_JFK_TOWER_TCA	KBD	TKDISKYB
C	KLGAD			MSITEQ				i	KYB_LGA_DEPT_RAD	KBD	TKKYBID
C	KLGADH			MSITEQ				i	KYB_LGA_DEPT_RAD_HO	KBD	TKKYBID
C	KLGAF			MSITEQ				i	KYB_LGA_FINAL_VECTOR	KBD	TKKYBID
C	KLGALCL			MSITEQ				i	KYB_LGA_TOWER_LOCAL	KBD	TKDISKYB
C	KLGATCA			MSITEQ				i	KYB_LGA_TOWER_TCA	KBD	TKDISKYB
M/A-KMDBMIAQ	3.122	3.0-37	MSITEQ	KIPM				Ti	DISP_A_BIT_ENCODED	KBD	
M/A-KMDBMIQ	3.122	3.0-37	MSITEQ	KIPM				Ti	DISP_BIT_ENCODED	KBD	
C	KMIC			MSITEQ				i	KYB_MICKE	KBD	TKKYBID
C	KMICH			MSITEQ				i	KYB_MICKE_HO	KBD	TKKYBID
C	KNERI			MSITEQ				Ti	KYB_NE_RAMP_1	KBD	TKDISKYB
C	KNWRI			MSITEQ				Ti	KYB_NW_RAMP_1	KBD	TKDISKYB
C	KRBV			MSITEQ				i	KYB_RBV_ABR_RAD	KBD	TKKYBID
C	KRBVH			MSITEQ				i	KYB_RBV_ABR_RAD_HO	KBD	TKKYBID
C	KSAT			MSITEQ				i	KYB_SATES	KBD	TKKYBID
C	KSATH			MSITEQ				i	KYB_SATES_HO	KBD	TKKYBID
C	KSNA			MSITEQ				i	KYB_SNA_ABR_RAD	KBD	TKKYBID
C	KSNAH			MSITEQ				i	KYB_SNA_ABR_RAD_HO	KBD	TKKYBID
C	KSWD			MSITEQ				i	KYB_SW_DEPT_RAD	KBD	TKDISKYB
C	KSWDH			MSITEQ				i	KYB_SW_DEPT_HO	KBD	TKDISKYB
C	KSWE			MSITEQ				i	SWEET_ROBINVL_KYB	KBD	TKKYBID
C	KSWEH			MSITEQ				i	KYB_HO_SWEET_ROBINVL	KBD	TKKYBID
C	KSWRI			MSITEQ				Ti	KYB_SW_RAMP_1	KBD	TKDISKYB
M/A-KYBPQ	3.119	3.0-37	MSITEQ					i	KYB_PER_DISP	DBM	
M/A-LALT			TI	ALTRKB ALTRKH1 CATU	COMA	HTQCC		i	CTS_REPS_SIZES_WORD_45	SPARM	
M/A-LAT	5.2.1	5.0-7									
C	LATTQ	2.103	2.0-18	TI	KOPA MAT			i	TIME_LATTICE_ADVANCE	SPARM	TKTRKPRM
M/A-LCONLQ	3.23	3.0-5	DSITEQ	COMA	KOPA	KOPB		A	NXT_CONTROLLER_LOWEST_POS	SPARM	
M/A-LCWDQ			DSITEQ	MISTG					LAST_C_WD		
M/A-LDAQ	8.2.3	8.0-2									
M/A-LEVIZQ	8.2.4	8.0-2									
C	LGAA			MSITEQ				i	LGA_DR_AIRPORT_Y	IPY	TKAPTID
C	LGAD			MSITEQ				i	LGA_DEPT_AIRPORT_Y	IPY	TKAPTID
M/A-LGCT	2.165	2.0-38									
M/A-LINCON	8.2	8.0-1									
M/A-LK2Q	7.2.1.6	7.0-19									
C	LLAQ	3.54.2	3.0-16	TI	COMA			i	ABTCC_LOW_TIME_DIF_DEP_ARIV_TBKTRACK		TKTRKPRM
C	LLKQ	3.54.2	3.0-16	TI	COMA			i	NOART_LOW_TIME_DIF_DEP_ARIV_TBKTRACK		TKTRKPRM
M/A-LNDIMQ	8.2.5	8.0-3									
C	LNTDBQ	3.123	3.0-37	MSITEQ	COMA	COMB		i	ADB_BCON_CODES_DISP	DISP	TKNISC
C	LNKCTQ	1.126	2.0-28	TI	COMA SLINK			i	NTRK_NO_LINK_FAIL	TRACK	TKTRKPRM
M/A-LNKT	2.165	2.0-38									
M/A-LNK1T	2.165	2.0-38									
M/A-LNK2T	2.165	2.0-38									
M/A-LSEP	7.2.1.6	7.0-19									
C	LSPDIQ	2.126	2.0-27	TI	TPUB	SPEEDP		Ti	SENSOR_SPEED_LOWER_SPEED	TRACK	TTSENSOR
M/A-MBQ	3.83	3.0-30	DSITEQ	DISTBT MBUFI				TA	MDRM_DISP_NO_PARAM	SPARM	
M/A-MACHQ	2.30	2.0-6									
M/A-MAXALRQ	8.6.2	8.0-26									
C	MAXBBIQ	3.127	3.0-38	MSITEQ				Ti	SENSOR_TYPE_MAX_BCON_RPTS	TRACK	TTSENSOR
M/A-MAXCMQ	2.50	2.0-9									
M/A-MAXIQ	7.1.1.1	7.0-1									
C	MAXRBIQ	3.127	3.0-38	MSITEQ				Ti	SENSOR_TYPE_MAX_BAD_RPTS	TRACK	TTSENSOR
M/A-MAZIQ	3.55.22	3.0-26									

N/A-MBDTQ			TI						i	THSHR_DT_MBD_PARM	DISP	
N/A-MBNI	2.166	2.0-40	TI	MSITEQ					Ti	NUM_MDBK_PERIPHERAL	PSRAP	
C MCDIQ	3.54.16	3.0-18	DSITEQ	TEXEC					tim	NO_MODE_C_DISP_INDICATOR	DISP	TKBCMSEL
N/A-MDBNQ	3.119	3.0-37	MSITEQ	DSLINT								
N/A-MENQ	3.1	3.0-1	MSITEQ	KOPB	TTYD				i	MAX_LEVEL_ADDRE	SPARM	
N/A-MFIRMQ	8.2.7	8.0-4										
N/A-MFMAMS	8.3	8.0-9										
N/A-MFSEPA	7.1.1.11	7.0-8	7.2.1.10	7.0-24	7.3.1.10	7.0-33						
N/A-MFSEPB	7.1.1.15	7.0-12	7.2.1.14	7.0-29	7.3.1.14	7.0-36						
N/A-MFZALQ	8.3.6	8.0-11										
N/A-MFISEQ	8.3.5	8.0-11										
N/A-MINCHQ	2.114	2.0-20	TI	ICHPNT								
N/A-MINDTQ	2.107	2.0-19	TI						i	DEDS_MIN_DEAD_TIME	DISP	
N/A-MISCAQ	2.34	2.0-7										
N/A-MISCGQ	2.42	2.0-8										
N/A-MISPAQ	2.35	2.0-7										
N/A-MISPGQ	2.43	2.0-8										
N/A-MLO	5.1.4	5.0-4										
N/A-MNLDTQ			DSITEQ						i	MIN_LARGE_DISP_DEAD_TIME	DISP	TKBCMSEL
N/A-MNRELQ	8.2.8	8.0-5										
N/A-MNRNGQ	3.134	3.0-40	DSITEQ	MCOMB	BDOP	SDB2			i	MIN_RDBK_RANGE_FLITER	RDBK	
C MOCQ	3.35	3.0-10	TSITEQ	TINIT					i	MODE_C_OVER_CHECK	TRACK	TKBISC
N/A-MPMEVQ	2.116	2.0-20	TI						i	MBUFF_MX_PRVAREA_CHAR	KBD	
N/A-MRDKYQ	3.77.2	3.0-29	MSITEQ	MRDKY								
N/A-MREADQ	2.115	2.0-20	TI	IPO KIP	MTGA	MTGCT	SDB2		i	MBUFF_MX_RDOUT_CHAR	KBD	
N/A-MRGIQ	3.55.22	3.0-26	TSITEQ	AAFXP					TA		TRACK	
MRSSIQ	3.33	3.0-9								ARRIVAL_FIX_AREA.RANGE		TTAUTOAQ
N/A-MRONQ	3.119	3.0-37	TI						i	DBM_SZ_MEM_RDOUT_LINE	DBM	
N/A-MSIQ	3.55.13	3.0-23	DSITEQ	MSWDAB					TA	MSAW_DISP_AREA	MSAW	
N/A-MSAW		3.5.2-2	SYSEQ0	ALTRKR	ALTRKBT	CPR	COMB	KOPA	i	MSAW_ALT_TBK	SPARM	
N/A-MSAW		3.5.2-2	SYSEQ0	KOPB	KOPC	MSAW	MSAWD	MSAWQ	i		SPARM	
N/A-MSAW		3.5.2-2	SYSEQ0	MSAW2D	MSAW2Q	MSAW3D	MSAW3Q	MSAW4D	i		SPARM	
N/A-MSAW		3.5.2-2	SYSEQ0	MSAW4Q	SDB1	SDB1RO	SDB2	SYSEQ1	i		SPARM	
N/A-MSAW		3.5.2-2	SYSEQ0	SYSEQ2	TMAP	TMP	TTYD		i		SPARM	
N/A-MSDSZQ			TI	MSITEQ					i	DBM_SZ_MSAW_CA_TAB_LIST	DISP	
N/A-MSW(A-D)	2.166	2.0-40										
N/A-MSWA		2.0-40	TI	COMB COMC	MSAW				i	MSAW_PERIPHERAL_NUMBER_A	MSAW	
N/A-MSWB		2.0-40	TI						i	MSAW_PERIPHERAL_NUMBER_B	MSAW	
N/A-MSWC		2.0-40	TI						i	MSAW_PERIPHERAL_NUMBER_C	MSAW	
N/A-MSWD		2.0-40	TI						i	MSAW_PERIPHERAL_NUMBER_D	MSAW	
N/A-MSWKYQ	3.77.2	3.0-28	MSITEQ	MSWKY								
N/A-MTDCBL	2.96	2.0-17	TI	MTP					i	DSC_READ_BUFFER	KBD	
N/A-MTDCBLA	2.95	2.0-17	TI	MTP					i	DSC_BUFFER_WORDS	KBD	
N/A-MTDCEA	2.99	2.0-18	TI	MTP					i	DSC_EFW_READ	KBD	
N/A-MTPLP	2.98	2.0-17	TI	MTP					i	*DSC_WORD_ADDRESS*	*KBD*	
N/A-MTQNQ	3.119	3.0-37	TI						i	DBM_SZ_TARGET_GEN_TBKS	DBM	
N/A-MTWAI	2.97	2.0-17										
N/A-MTWAI			TI						i	DSC_21_FLT_PLANS	SPARM	
N/A-MTRECQ	3.54.3	3.0-16	MSITEQ	MTSTP								
N/A-MWALQ	8.6.3	8.0-26										
N/A-MXALQ	7.1.1.6	7.0-5	7.2.1.5	7.0-18								
N/A-MICTQ	2.108	2.0-19	TI						i	DEDS_C_WORD_DISP_TIME	DISP	
N/A-MXRNGQ	3.134	3.0-40	DSITEQ	BDOP					i	MAX_RDBK_RANGE_FILTER	DBM	
N/A-MXSDTQ			DSITEQ						i	MAX_SMALL_DISP_DEAD_TIME	DISP	TKBCMSEL
N/A-MICAQ	8.2.6	8.0-4										

N/A-M2CAQ	8.3.3	8.0-10						
N/A-M3CAQ	8.3.4	8.0-10						
N/A-M4CAQ	8.4.6	8.0-17						
N/A-M5CAQ	8.4.7	8.0-19						
N/A-N10PQ	3.63	3.0-27						
N/A-NaQ	3.34	3.0-10	DSITEQ	PRIPHT		TA	MDBM_PERIPH_NO_PARAM	DISP
N/A-NxxxQ	3.42	3.0-13		NCNT				
N/A-NAAQ		3.0-38	MSITEQ	MSAW3D MSAW4D MSMOVE SDB1				MSAW
N/A-NAAQ	3.129	3.0-38	MSITEQ	COMB MSAWD MSAWQ MSAW2D MSAW2Q		i	NO_MSAW_AURAL_ALARM	MSAW
N/A-NADBQ			TI	DTK2			NO_WDS_PER_ADB	
N/A-NAP1JQ	3.55.2	3.0-19						
N/A-NARTCQ	3.13	3.0-3	DSITEQ	IDAT KOPA		A	NO_ARTCC_CONTROL_POSITION	IFI
N/A-NARTSQ	3.8	3.0-2	DSITEQ	IDAT IFI KOPA		A	IFI_NO_ARTS_FACILITY_ADAPTED	IFI
N/A-NAUTDQ			TI	AUT		i	TIME_AUTO_OFFSET_DISPLAY	DISP
N/A-NCDRBFQ	2.139	2.0-32						
N/A-NCDRDFQ	2.140	2.0-32						
N/A-NDBMDQ	3.73	3.0-28	MSITEQ	TTYD		i	NO_DISPS_REFRESHED	DISP
N/A-NDCPEQ	2.185	2.0-44	TI	RDBMD		i	RDBM_CTA_A_B_PARITY_ERROR	DISP
N/A-NDDSAQ	2.185	2.0-44	TI	RDBMD		i	RDBM_CRA_DATA_SET_ALARM	DISP
N/A-NDITQ	2.185	2.0-45	TI	RDBMD		i	RDBM_CRA_INPUT_TIMING_ERROR	DISP
N/A-NDNDDQ	2.185	2.0-44	TI	RDBMD		i	RDBM_NO_DATA_RECV_FROM_DPS	DISP
N/A-NDODPQ	2.185	3.0-44	TI	RDBMD		i	OUT_DATA_PARITY_RDBM_DISPLAY	DISP
N/A-NDOSQ	2.185	2.0-45	TI	RDBMD		i	OUT_OF_SYNCH_RDBM_DISPLAY	DISP
N/A-NDOSQ	2.185	2.0-45	TI	RDBMD		i	RDBM_CRA_OUT_OF_SYNCH	DISP
N/A-NDOTQ	2.185	2.0-45	TI	RDBMD		i	RDBM_CTA_OUTPUT_TIMING_ERROR	DISP
N/A-NORADARQ	3.126	3.0-38						
N/A-NDRIPQ	2.185	2.0-45	TI	RDBMD		i	INPUT_PARITY_RDBM_DISPLAY	DISP
N/A-NDROPQ	*2.185*	*2.0-45*	*TI*	*RDBMD*		*i*	*OUT_PARITY_RDBM_DISPLAY*	*DISP*
N/A-NDTPEQ	2.185	2.0-44	TI	RDBMD		i	RDBM_TSR_PARITY_ERROR	DISP
N/A-NDUQ	3.128	3.0-38	MSITEQ	SDB2 TBT		i	NO_DISP_BK_TBT	SPARM
N/A-NENT	5.1.5.2	5.0-5						
N/A-NFDBQ	2.113	2.0-20	TI	COMA COMB SDB2		i	DBM_WD_FOR_FDB	DISP
c NGCWDQ			DSITEQ	MISTG			NO_C_WDS		TKBCNSEL
c NIFRQ	3.20	3.0-4	DSITEQ	VIALT VICIXT VICDT		i	CODE_INFO(IFR)	IFI	TTBCNBNK
N/A-NIOPPQ			MSITEQ			i	NO_IOPS_PULL_LEVEL	SPARM
N/A-NIOPQ			MSITEQ	MTGA SDB1 SDB1RO SDB2 TMP		i	NO_IOPS	SPARM
N/A-NIOP1Q			MSITEQ			i	NO_IOPS_LEVEL_1	SPARM
N/A-NIOP2Q			MSITEQ			i	NO_IOPS_LEVEL_2	SPARM
N/A-NLEGS	7.1.1.7	7.0-6						
N/A-NMDBMQ	3.71	3.0.28	MSITEQ	TTYD KIPM MBUF MINBUF SDB1RO SDB2		i	NO_OF_MDBMS	SPARM
N/A-NMDBQ			TI	DTK3			NO_WDS_PER_MDB	
N/A-NNDIDQ	2.185	2.0-44	TI	RDBMD		i	RDBM_NO_INPUT_DATA_DSPLY	DISP
N/A-NNDODQ	2.185	2.0-44	TI	RDBMD		i	RDBM_NO_OUTPUT_DATA_DSPLY	DISP
N/A-NOCTSWRDS	3.79	3.0-29	MSITEQ	CRIT CRITD		i	CRIT_NO_WORDS_PER_TRK	CRIT
N/A-NORADARQ			MSITEQ			i	NO_SCAN_RAD_DEL_TILD	SPARM
N/A-NORADQ	3.126	3.0-38	MSITEQ	SDB1RO SDBS TTYD		i	TILD_EFFECT_NO_SCAN_RAD_DEL	SPARM
N/A-NPSWQ	3.119	3.0-36	MSITEQ	MPEB SDB2		i	NO_SUPLISTS_DBM	DBM
N/A-NRBFQ	2.140	2.0-43	TI			i	NO_OUTPUT_BUFF_HI_BIT	DISP
N/A-NRBUFQ	2.174	2.0-42	DSITEQ	RCOMB RDBMD RDOP		i	NO_OUTPUT_BUFFER	SPARM
N/A-NRBUFQ	2.174	2.0-42	TI	MSITEQ RCOMB RDBMD RDOP		i	NUM_RDBM_OUTPUT_BUFFERS	DISP
N/A-NRDBMDQ	3.72	3.0-28	MSITEQ	RCOMB RDBMD SDB1RO SDB2		i	NO_OF_RDBMS	SPARM
N/A-NREC&Q	2.144	2.0-44	TI	RDBMD		i	CRA_LRC_CRC_ERROR	DISP
N/A-NREDSAQ	2.184	2.0-44	TI	RDBMD		i	CRA_DATA_SET_ALARM	DISP
N/A-NREITQ	2.184	2.0-44	TI	RDBMD		i	CRA_INPUT_TIMING_ERROR	DISP
N/A-NREOSQ	2.184	2.0-44	TI	RDBMD		i	CRA_OUT_OF_SYCNH	DISP

N/A-NRLPFQ	2.184	2.0-43	TI	RDBMD	i	CRA_PARITY_ERROR	DISP		
C NSECLQ	2.128	2.0-30	TI	SUBS TEXEC	i	TRK_SUBPGM_NSECT_LNGT	TRACK	TKTRKPRM	
C NSENSQ		3.0-1	MSITEQ	MSAWD MSAWQ MSAW2D MSAW2Q MSAW3D		NO_SNSBS	SPARM	TKRANGE	
C NSENSQ		3.0-1	MSITEQ	MSAW3Q MSAW4D MSAW4Q MSMOVE MTGA		NO_SNSBS	SPARM	TKRANGE	
C NSENSQ		3.0-1	MSITEQ	MTGCT RDBMD MTQCC SDB1 SDB1RO		NO_SNSBS	SPARM	TKRANGE	
C NSENSQ		3.0-1	MSITEQ	SDB2 SUBS TRT TTYD		NO_SNSBS	SPARM	TKRANGE	
C NSENSQ	3.2	3.0-1	MSITEQ	CDAT CORD CRIT CRITD DBAT	i	NO_SNSBS	SPARM	TKRANGE	
C NSTAGQ			MSITEQ	*MPEB RDBMD SDB2*	i	NO_STAG	SPARM	TKMISC	
N/A-NSINQ			MSITEQ	SDB2 TRT	i	NO_TRKS_PER_DISP	SPARM		
N/A-NTRDSAQ	2.183	2.0-43	TI	RDBMD	i	CTA_DATA_SET_ALARM	DISP		
N/A-NTRNGQ	3.130	3.0-39	MSITEQ	TNGACT					
N/A-NTROSQ	2.183	2.0-43	TI	RDBMD	i	CTA_OUT_OF_SYNCH	DISP		
N/A-NTROUTQ	2.183	2.0-43	TI	RDBMD	i	CTA_OUTPUT_TIMING_ERROR	DISP		
N/A-NTRPEQ	2.183	2.0-43	TI	RDBMD	i	CTA_PARITY_ERROR	DISP		
C NUMICBQ	3.111	3.0-35	TSITEQ	SIPNCA	Ti	SENSOR_TYPE.NO_CLUTTER_BIN..	SPARM	TTSENSOR	
N/A-NUMDFQ	3.79	3.0-29	MSITEQ	CRITD	i	CRIT_NO_DISPLAY_LO	CRIT		
C NUMDQ	3.57	3.0-26	MSITEQ	KIPM KOPB MTGA MTGCT MTDOP	i	NO_DISPS		TKRANGE	
C NUMDQ	3.57	3.0-26	MSITEQ	SDB1RO SDB2 TRT	i	NO_DISPS			
N/A-NUMKFQ	3.79	3.0-29	MSITEQ	CRITD SDB2	i	CRIT_NO_KYB_LO	CRIT		
C NUMKQ	3.4	3.0-1	MSITEQ	KOPB SDB1RO SDB2	i	NO_KEYBDS	KBD	TKRANGE	
N/A-NUMTRKS	3.79	3.0-29	MSITEQ	CRIT CRITD	i	CRIT_NO_ASSC_TRK_IN_FULL	CRIT		
N/A-NUN2	7.1.1.6	7.0-5							
N/A-NVASIQ	3.112	3.0-35							
C NVFRIQ	3.20	3.0-4	DSITEQ	VIALT VICIXT VICDT	Ti	CODE_INFO.NVFR	IFY	TTBCNBNK	
C NVFRQ	3.20	3.0-4	DSITEQ	VIALT VICIXT VICDT	i	CODE_INFO	IFY	TTBCNBNK	
N/A-NWADBQ			TI		i	DSP_SZ_ADB	DISP		
N/A-NWFDBQ			TI		i	DSP_SZ_FDB	DISP		
N/A-NWMDBQ			TI		i	DSP_SZ_MDB	DISP		
N/A-NWSSQ			TI		i	DSP_SZ_SS	DISP		
N/A-N1CAQ	8.2.6	8.0-4							
N/A-N2CAQ	8.3.3	8.0-10							
N/A-N3CAQ	8.3.4	8.0-10							
N/A-N4CAQ	8.4.6	8.0-17							
N/A-N5CAQ	8.4.7	8.0-18							
N/A-OLCOBQ	8.5.1	8.0-21							
N/A-OLDATQ	8.2.9	8.0-5							
N/A-OLDYX			TI	TCAS0	i	CTS_REPS_SIZES_WORD_43	SPARM		
N/A-OLDYXD			TI	TCAS0	i	CTS_REPS_SIZES_WORD_44	SPARM		
C OVALTQ	3.49	3.0-15	TSITEQ	TPBEP	i	MIN_OVPLT_ALT_ARB	TRACK	TKMISC	
C OVER	3.139	3.0-40	MSITEQ	TTYD	i	OVERFLIGHT	DISP	TKAPTID	
N/A-OVLS		3.5.2-2	SYSEQ0	SYSEQ1 SYSEQ2	i	OVERLOAD_SENSING	SPARM		
N/A-OVRQ	2.122	2.0-22	MSITEQ	PDOP SDB1RO	i	OVERLOAD_SENSING	SPARM		
C PADQ	3.136	3.0-40	DSITEQ		TA	DISPLAY_CONFIG_TYPE.PADQ	DISP	TTDISP	
N/A-PALF	2.165	2.0-39							
N/A-PALTIQ	3.55.12	3.0-23							
N/A-PARALQ	8.2.10	8.0-6							
N/A-PAMINQ	8.5.9	8.0-25							
N/A-PARMS	8.0	8.0-1							
N/A-PAZIQ	3.55.12	3.0-23							
N/A-PCTIMQ	2.36	2.0-7							
N/A-PDAIQ	3.55.11	3.0-23							
N/A-PDBIT	2.165	2.0-39							
N/A-PDBJT	2.165	2.0-39							
N/A-PDN	7.2.1.8	7.0-22							
N/A-PDP	7.2.1.8	7.0-22							

```
M/A-PDBIQ       3.55.11  3.0-23
M/A-PE          7.2.1.14 7.0-29
C   PEAMXQ      2.7      2.0-2   TI      TSUBO T.SB1                     X   MTRK_MI_ERR AZ._LIM.    TRACK   TKTRKPRM
M/A-PENT        5.1.5.3  5.0-6
C   PERRT                                                               T   PERRT_TABLE            TRACK   TTPERRT
M/A-PPSEQ       8.5.2    8.0-21
M/A-PJTIMQ      2.37     2.0-7
M/A-PU          7.2.1.14 7.0-29
M/A-POST        5.2.4    5.0-9
M/A-PQTIQ                        TI                                     TI  DSP_BRIGHTNESS          DISP
M/A-PPMI        5.2.6    5.0-9
M/A-PRGIQ       3.55.12  3.0-23
M/A-PROCON      8.4      8.0-15
M/A-PROJX                        TI      CALTO T.A.O  TSUBO   T.SB1   TRJCA   I   CTS_BEPS_SIZES_WORD_37  SPARM
M/A-PROJY                        TI      CALTO T.ASO  TSUBO   T.SB1   TRJCA   I   CTS_BEPS_SIZES_WORD_38  SPARM
M/A-PRTNMQ                       TI                                      I   MTRK_ALLOC_PRTY         TRACK
C   PSEMSQ      3.65     3.0-27  MSITEQ  SDB1    SDB1RO                  I   NO_TSNAP                SPARM   TKRANGE
M/A-PSFLQ       3.54.4   3.0-17  MSITEQ  RCMP
M/A-PTA1Q       8.4.9    8.0-19
M/A-PTA2Q       8.4.10   8.0-19
M/A-PTH01U      7.1.1.13 7.0-10
M/A-PTH01S      7.1.1.12 7.0-9
M/A-PTH02S      7.1.1.14 7.0-11
M/A-PTH024      7.1.1.15 7.0-12
M/A-PTH01d      7.2.1.12 7.0-27
M/A-PTH01S      7.2.1.11 7.0-26   7.3.1.11 7.0-34
M/A-PTH01U      7.2.1.12 7.0-34
M/A-PTH02S      7.2.1.13 7.0-28   7.3.1.13 7.0-35
M/A-PTH02U      7.2.1.14 7.0-29   7.3.1.14 7.0-36
M/A-PTH1S       7.2.1.7  7.0-20
M/A-PTH1U       7.2.1.8  7.0-22
M/A-PTH2S       7.2.1.9  7.0-23
M/A-PTH2U       7.2.1.10 7.0-24
M/A-PTIMEQ      2.32     2.0-6
M/A-PTSQ        7.1.1.10 7.0-8    7.2.1.9  7.0-23   7.3.1.9  7.0-32
C   PURTOQ      2.104    2.0-37  TI      TPUR                            LIM TIMR_MAX_EXEC_T TIME    PSBAP   TKTRKPRM
M/A-PVPADQ      2.31     2.0-6
M/A-PWDQ        2.118    2.0-21  TI      IPO_KIP     KOPA    KOPC    MISC  I   MPS_PREV_BUFF_BY_WORDS  SPARM
M/A-PWDJ        2.118    2.0-21  TI      MTGA MTGCT  RKIP    SDB2                                    SPARM
M/A-PZSJQ       8.4.8    8.0-18
M/A-QA          7.1.1.6  7.0-5
M/A-RIQ         3.133    3.0-40  DSITEQ  TASTO TTASTO VIAIT VICDT MPOTACK        TA   RDAM_DISP_NO_PARAM      DISP
M/A-RAIJKQ      3.55.6   3.0-21
M/A-RADIQ       3.132    3.0-37
M/A-RADSCMQ                      TI                                     I   AUTO_INT_RADAR_RESPONSE TRACK
M/A-RALTVQ      2.29     2.0-6
C   RATLEN1Q    3.127    3.0-38  MSITEQ  RATEIT RATAI ENDRAT THAT RATIT RATAIT TI  SENSOR_TYPE_RATIT_LNGTH SPARM   TTSENSOR
M/A-RAXIQ       3.135    3.0-40  DSITEQ  RDBMD               SDB2            TI  COORD_X_RANGE_FILTER_CENTER RDBM
M/A-RAYIQ       3.135    3.0-40  DSITEQ  RDBMD               SDB2            TI  COORD_Y_RANGE_FILTER_CENTER RDBM
M/A-RJIJKQ      3.55.5   3.0-19a
M/A-RBEAT       2.169    2.0-37
C   RBMTIQ      3.102    3.0-31  TSITEQ  RBMSHT                             TI  SENSOR_TYPE_RB_MI_HIT_INIT  TRACK   TTSENSOR
M/A-RBMTRI      2.169    2.0-40  TI      RDBMD                           TI  BOMB_RECEIVER_ADAPTER  DISP
C   RBMSIQ      3.105    3.0-31  TSITEQ  RBMSHT                          TI  SENSOR_TYPE_RB_MI_HITS_PUB  TRACK   TTSENSOR
M/A-RBMTI       2.167    2.0-40  TI      RDBMD                           TI  RDBM_TRANSMITTER_ADAPTER  DISP
```

C RBWLIQ	3.108	3.0-34	TSITEQ	RBSHFT	Ti	SENSOR_TYPE.RB_SLIDE_WINDO_LENGTH	TRACK TTSENSOR
N/A-RC1JKQ	3.55.4	3.0-20					
N/A-RD1JKQ	3.55.5	3.0-20a					
N/A-RDSP		3.5.2-1	SYSEQ0	COMA COMB COMC DOP IPI	i	RMT_DISP	SPARM
N/A-RDSP		3.5.2-1	SYSEQ0	KOPA KOPB KOPC MPEB MSAW	i		SPARM
N/A-SDSP		3.5.2-1	SYSEQ0	MSAWQ MSAW2Q MSITEQ MTGA MTGCT	i		SPARM
N/A-RDSP		3.5.2-1	SYSEQ0	QLOOK RCOMR RDBMD RDOP RKIP	i		SPARM
N/A-RDSP		3.5.2-1	SYSEQ0	RTDOP SDB1 SLINK SYSEQ1 SYSEQ2	i		SPARM
N/A-RDSP		3.5.2-1	SYSEQ0	TRAD	i		SPARM
N/A-REC	5.2.3	5.0-8					
N/A-RECRT	2.165	2.0-38					
C RELIQ			MSITEQ		i	REL_sdsr	TKMISC
N/A-RENAM	5.2.2	5.0-7					
N/A-REQMTQ	2.177	2.0-42	TI	RCOMB	i	RDBM_EXPECTED_EOM_TIMEOUT	DISP
C REPOSQ	2.18	2.0-4	TI	KOPB	i	TIME_20_REPOSITION_mil_secs	KBD tktrkprm
N/A-RERRCTQ	2.178	2.0-42	TI	RCOMB	i	RDBM_CLR_ERROR_CNT_DLTA_TIME	DISP
C RFDQ	2.123	2.0-25	TI	COMA COMB PSRAP TSUB0 TSUB1	ebc	RAD_FAL_BEACON_CODE_ALLOC	SPARM TKMISC
N/A-RFCTQ	2.123	2.0-25	TI	COMB	ebc	RAD_FAL_COUNTDOWN_CODE	SPARM
N/A-RGAZT	2.165	2.0-37					
N/A-RGBIJQ	3.110	3.0-34	TSITEQ	RNGBIN	TA	RANGE_BIN_AREA	SPARM
N/A-RGCH2KQ	2.162	2.0-36	TI		r	AUT_INT_RNG_CHECK	TRACK
N/A-RIBFMQ	2.179	2.0-42	TI	RDOP	i	DLTA_TIME_BTWN_INIT_BUFFERS	TRACK
N/A-RINTQ	2.181	2.0-43	TI	RDBMD	i	RDBM_INPUT_BUFF_LNGTH	DISP
N/A-RM1JKQ	3.55.7	3.0-21					
N/A-RMA1JKQ	3.131	3.0-39					
N/A-RNGMP	2.39	2.0-7					
C ROHTIQ	3.101	3.0-33	TSITEQ	ROMSHT			
C ROMSIQ	3.104	3.0-33	TSITEQ	ROMSHT	Ti	SENSOR_TYPE.RDB_NO_HIT_INIT	TRACK TTSENSOR
C RQQ	2.160	2.0-36	TI	TSUB0 TSUB1	Ti	SENSOR_TYPE.RDB_NO_MISS_PUR	TRACK TTSENSOR
N/A-RORP/RCRP		3.5.2-2	SYSEQ0	CDR KOPB KOPC MSITEQ MTGCT	i	MTRK_SCANS_CDR_SET	TRACK TKTRKPRM
N/A-RORP/RCRP		3.5.2-2	SYSEQ0	RDOP PSRAP SDB1 SDB1RO SUBS	i	RDR_ONLY_RPT_PROCESS	SPARM
N/A-RORP/RCRP		3.5.2-2	SYSEQ0	SYSEQ1 SYSEQ2 TEXEC TI TPUR	i	RDR_ONLY_RPT_PROCESS	SPARM
N/A-RORP/RCRP		3.5.2-2	SYSEQ0	TTYD	i	RDR_ONLY_RPT_PROCESS	SPARM
C ROTIQ	3.76	3.0-28	TSITEQ	ENDROT ROTII	i	RDR_ONLY_RPT_PROCESS	SPARM
C ROTSPDIQ	3.93	3.0-32	TSITEQ	ROTSPDIQ	Ti	SENSOR_TYPE.SIZE_ROT	TRACK TTSENSOR
C ROTSIED			TSITEQ		Ti	SENSOR_TYPE.ROT_SPEED	TRACK TTSENSOR
C ROZEIQ	3.106	3.0-34	TSITEQ	ROSHFT	Ti	SENSOR_TYPE.RDB_O_CLUTTER_MAX..	TRACK TTSENSOR
N/A-RRRQ	1.126	2.0-29	TI		Ti	SENSOR_TYPE.RDB_SLIDE_WINDO..	TRACK TTSENSOR
N/A-RSAAQ	2.126	2.0-27	TI		i	MTRK_RRH	TRACK
N/A-RSALQ	2.126	2.0-27	TI		i	MTRK_RSAA	TRACK
N/A-RSNAQ	2.126	2.0-27	TI		i	MTRK_RSAL	TRACK
N/A-RSNLQ	2.126	2.0-27	TI		i	MTRK_RSNA	TRACK
N/A-RSTAGQ			MSITEQ		i	MTRK_RSNL	TRACK
N/A-RSWRECQ	2.173	2.0-41	TI	RDBMD	i	NO_WORDS_STAGGER	SPARM
N/A-RSWTRAQ	2.172	2.0-41	TI	RDBMD	i	RDBM_CRA_STAT_WORD_TBL_LNGTH	DISP
N/A-RTCQ	2.101	2.0-18	TI	ALTRKW ALTRKR1 AUT BRATS CALERT	i	RDBM_CTA_STAT_WORD_TBL_LNGTH	DISP
N/A-RTCQ	2.101	2.0-18	TI	CALTRK CATU CDR COMA COMB	i	TIME_REALTIME_CLOCK_ADDR	SPARM
N/A-RTCQ	2.101	2.0-18	TI	COMC CRIT DOP IPI IPO			SPARM
N/A-RTCQ	2.101	2.0-18	TI	KIPM KOPA KOPB KOPC MAT			SPARM
N/A-RTCQ	2.101	2.0-18	TI	MSAW MTGA MTGCT PDOP PSRAP			SPARM
N/A-RTCQ	2.101	2.0-18	TI	QLOOK RCOMR RDOP RKIP RTQCC			SPARM
N/A-RTCQ	2.101	2.0-18	TI	SLINK SWABS TEXEC TINIT TPUR			SPARM
N/A-RTCQ	2.101	2.0-18	TI	TSUB0 TSUB1 TUDCA			SPARM
N/A-RTMOUTQ			TI	RDOP			SPARM
N/A-RTNI	2.182	2.0-43	TI	RKIP	i	RDBM_INIT_TIMEOUT_SECS	DISP
					i	NO_RDBM_INPUT_TIMEOUT_VALUE	DISP

N/A-RWDQ	2.119	2.0-21	TI	IFO KIP KOPA KOPB KOPC	i	MEM_BOOUT_BUFF_NO_WORD	SPARM	
N/A-BWBQ	2.119	2.0-21	TI	MPEB MTGA MTGCT SDB2			SPARM	
N/A-SIQ	3.29	3.0-8	DSITEQ	DCONT DRIAGT SDABT MSWDAB TRBCXT	TA	DISP_SYS_DATA_PARAM	DISP	
N/A-SIDT1Q	3.29	3.0-8	3.59	3.0-27 MDTSX DTP	Ti	SS_DISP_DEAD_TIME_1	DISP	
N/A-SIDT2Q	3.59	3.0-27		MDTSX DTP	Ti	SS_DISP_DEAD_TIME_2	DISP	
C SABQ	2.123	2.0-25	TI	KOPA KOPB KOPC PSRAP TISI TSUB0 TSUB1	T ebc	SUS_AIR_BEACON_CODE	SPARM	TKMISC
N/A-SALTQ	2.123	2.0-25	TI	COMB	ebc	SUS_AIR_COUNTDOWN_CODE	SPARM	
N/A-SALF	2.165	2.0-39						
N/A-SALT1JQ	3.55.16	3.0-24						
N/A-SALT1Q	3.55.17	3.0-25						
N/A-SAT1Q	3.54.19	3.0-18	MSITEQ	MSAWD MSAWQ MTGA MTGCT	Ti	NO_SATELLITE	SPARM	
C SAPHQ	3.54.11	3.0-17	MSITEQ	IPI MIP	i	CTS_PERCENT_TRANSMITTER_PP	SPARM	TKMISC
C SAIQ	3.54.10	3.0-17	MSITEQ	TTYD	i	CTS_PERCENT_CNTL_TSK_CAPACITY	TRACK	TKTBKPRM
N/A-SAZ1JQ	3.55.16	3.0-24						
C SAZQ	2.9	2.0-3	TI	TSUB0 TSUB1	c	MTRK_SEC_AZI_BIN_MULT	TRACK	TKTBKPRM
N/A-SBAOTQ	2.70	2.0-13	TI	SBAOT				
N/A-SBBAAQ	2.73	2.0-13	TI	SBBAA				
N/A-SBBFDTQ	2.68	2.0-12	TI	SBBFDT				
N/A-SBBFOQ	2.76	2.0-14	TI	SBBFO				
N/A-SBBNAQ	2.75	2.0-14	TI	SBBNA				
N/A-SBBRAQ	2.74	2.0-13	TI	SBBRA				
N/A-SBBRPQ	2.67	2.0-12	TI	SBBRP				
N/A-SBDFOQ	2.77	2.0-14	TI	SBDFO				
N/A-SBHCTQ	2.89	2.0-16	TI	SBHCT				
N/A-SBIEQ	2.71	2.0-13	TI	SBIE				
N/A-SBNCWOQ	2.69	2.0-13	TI	SBNCWO				
N/A-SBTOQ	2.66	2.0-12	TI	SBTO				
N/A-SBTTNDQ	2.72	2.0-13	TI	SBTTND				
N/A-SCDQ	3.40	3.0-11	DSITEQ	SCT	Ti	BCON_INIT_SELCT	IPI	
C SCANIQ	3.19	3.0-4	MSITEQ	MTGA MTGCT SDB1 SDB1RO	Tiia	SENSOR_TYPE.SNSR_SCAN_TIME	SPARM	TTSENSOR
N/A-SCTLGTH	3.79	3.0-29	MSITEQ	CBIT CBITD	i	CBIT_LNGTH_SELECT_CODE_TABLE	CBIT	
N/A-SC4DQ	2.120	2.0-21	TI	MPEB SDB2	i	MEM_SELCT_CODE_BUFF_WORDS	KBD	
N/A-SECTOLQ	2.134	2.0-31	TI	PSRAP	tia	PSRAP_SECTR_MRK_0_SAI_DLTA_WAIT	PSRAP	
N/A-SFIFOQ	2.133	2.0-31	TI		i	SRAP_OUTPUT_FIFO_MOD_WORDS	PSRAP	
N/A-SFIRMQ	2.126	2.0-26	TI		i	MTRK_FIRM_SPIRM	TRACK	
N/A-SILLQ	2.94	2.0-15	TI	SBIC				
C SIMSNTQ	2.91	2.0-16	TI	PSRAP SDB1	:	SRAP_SECTR_MRK_ERROR_THRESHLD	PSRAP	TKMISC
N/A-SIPBLQ	2.168	2.0-41	TI	PSRAP SDB1 SDB1RO	i	SRAP_INPUT_BUFFER_LNGTH	PSRAP	
N/A-SIPCSMQ	2.136	2.0-31	TI	PSRAP	i	MIN_SECTR_MRK_FOR_PSRAP_SYNCH	PSRAP	
N/A-SIPDERQ	2.138	2.0-32	TL	PSRAP	i	PSRAP_THRESHLD_FOR_ILLEGAL_IOS	PSRAP	
N/A-SIPIDERQ		2.0-32	TI		i	SRAP_TO_FAIL_NUM_WORDS	PSRAP	
N/A-SIPIPQ	2.131	2.0-30	TI	PSRAP	i	MX_SRAP_INP_PARITY_ERR_FAILURE	PSRAP	
N/A-SIPIPBSQ	2.137	2.0-31	TI	PSRAP	:	PSRA_SYNCH_INSECTIV_ID_BITS_PAR	PSRAP	
N/A-SIPLWIQ	2.135	2.0-31	TI	PSRAP	i	SRAP_ERROS_WOUT_P_RAP_INP_FAIL	PSRAP	
N/A-SIPPMTQ	2.92	2.0-16	TI	PSRAP SDB1	i	SRAP_SLB_THRESHLD_VALID_DITA_TIM	PSRAP	
N/A-SIPPTLQ	2.169	2.0-41	TI	PSRAP SDB1	i	SRAP_ CAS TIME_STOR TOL_LNGTH	PSRAP	
N/A-SIPWOTQ	2.171	2.0-41	TI	PSRAP SDB1 SDB1RO	i	OUTPUT_TIME_BOT_STOR_OVFLOW_MSG	PSRAP	
N/A-SIPSTLQ	2.129	2.0-30	TI	PSRAP	i	PSRAP_LNGTH_INTRUP_STATUS_TABLE	PSRAP	
N/A-SIPTPQ		2.0-30	TI	PSRAP	i	SRAP_TIME_DELAY_BTWN_FAILURES	PSRAP	
N/A-SIPTIMEQ	2.130	2.0-30	TI	PSRAP	i	PSRAP_STARTUP_TIME	PSRAP	
N/A-SIPTOSEQ	2.170	2.0-41	TI	PSRAP	i	OUTPUT_TIME_FOR_SYNCH_FAIL_MSG	PSRAP	
C SLEVQ	3.02	3.0-27	MSITEQ	KOPB SDB2	:	[illegible] LEVEL	SPARM	TKMISC
N/A-SLIST	2.165	2.0-38						
C SMOOT					:	SM[illegible] TABLE	TRACK	TTSMOOT
N/A-SMOOPEQ	2.83	2.0-15	TI	SMPOPP				

N/A-SMPRBSQ	2.80	2.0-14	TI	SMPRBS				
N/A-SMPRDPQ	2.79	2.0-14	TI	SMPRDP				
N/A-SMPRTQ	2.81	2.0-15	TI	SMPRT				
N/A-SMPSPQ	2.78	2.0-14	TI	SMPSP				
N/A-SMPTOQ	2.82	2.0-15	TI	SMPTO				
N/A-SNFTTQ	2.90	2.0-16	TI	SIPTTP				
N/A-SNROBPQ	3.120	3.0-37	TI	SNROBP				
c SPDIQ	3.54.17	3.0-18	DSITEQ	TEXEC	tim	NO_SCRATCH_PAD_INDICATOR	DISP	TRBCNSEL
N/A-SPDN	7.2.1.7	7.0-20						
N/A-SPDP	7.2.1.7	7.0-20						
N/A-SPEEDQ	2.10	2.0-3	TI		r	MTRK_RATE_TURN_SPEED	TRACK	
N/A-SRAOTQ	2.60	2.0-11	TI	SRAOT				
N/A-SRGLJQ	3.55.16	3.0-24						
c SRGQ	2.11	2.0-3	TI	TSUB0 TSUB1	r	MTRK_SEC_RNG_BIN_MULT	TRACK	TKTRKPRM
N/A-SRMAXQ	8.3.7	8.0-12						
N/A-SRPA	2.166	2.0-40	TI	SIPSRAC SRAPNT				
N/A-SRPB	2.166	2.0-40	TI	SIPSBIN1 SIPRIC SIPICIN SIPE SIPD SI PTIO SRAPNT				
N/A-SRPC	2.166	2.0-40	TI	SIPSBIN2 SRAPNT				
N/A-SRPD	2.166	2.0-40	TI	SRAPNT				
N/A-SRPE	2.166	2.0-40	TI	SIPSBIN3 SRAPNT				
N/A-SRPF	2.166	2.0-40	TI	SRAPNT				
N/A-SRPG	2.166	2.0-40	TI	SIPSBIN4 SRAPNT				
N/A-SRPH	2.166	2.0-40	TI	SRAPNT				
N/A-SRPKYQ	3.77.1	3.0-28	MSITEQ	SRPKY				
N/A-SRRDAAQ	2.56	2.0-10	TI	SRRDAA				
N/A-SRRDEQ	2.59	2.0-11	TI	SRRDE				
N/A-SRRDQ	2.65	2.0-12						
N/A-SRRDRAQ	2.57	2.0-11	TI	SRRDRA				
N/A-SRRDTQ	2.61	2.0-13	TI	SRRDT				
N/A-SRRPOQ	2.55	2.0-10	TI	SRRPO				
N/A-SRRRPQ	2.63	2.0-12	TI	SRRRP				
N/A-SRRSDTQ	2.62	2.0-11	TI	SRRSDT				
N/A-SRRTOQ	2.64	2.0-12	TI	SRRTO				
N/A-SRTTNDQ	2.58	2.0-11	TI	SRTTND				
N/A-SRUSE	5.1.3	5.0-3						
N/A-SSA1Q	2.112	2.0-20	TI		i	DBM_SS_A_WORD_PROC	DISP	
N/A-SSA2Q	2.112	2.0-20	TI		i	DBM_SS_A_WORD_NO_PROC	DISP	
N/A-SSBQ	2.109	2.0-19	TI		i	DEDS_SS_WORD_DISP_TIME	DISP	
N/A-SSDTQ			TI		i	TMSHR_DT_SS_PARM	DISP	
N/A-SSSNQ	3.119	3.0-37	MSITEQ	DSLINT				
N/A-STAGQ	3.58	3.0-26	TSITEQ		i	PRF_ASR7_STAGGER	MSAW	
N/A-STDISQ	2.53	2.0-10						
N/A-STRNQ	3.119	3.0-37	TI		i	DBM_SZ_STORE	DBM	
N/A-STTALLQ	2.68	2.0-16	TI	STTAZN				
N/A-STTAULQ	2.67	2.0-16	TI	STTAZN				
N/A-STTBLLQ	2.66	2.0-15	TI	STTBNG				
N/A-STTBULQ	2.65	2.0-15	TI	STTBNG				
N/A-SUBQ	3.12	3.0-3	DSITEQ	IPI	A	IPY_COORD_SENSOR	IPY	
c SUPIV	3.22	3.0-5	DSITEQ	COUNT	b	KYB_TYPE.SUPKQ		TKKEYBD
c SUPKYQ	3.77.2	3.0-29	MSITEQ	SUPKY		SUPERVISORY_ENABLE		TKMISC
c SUPLEGAL	3.90	3.0-31	MSITEQ	KOPC	i	SUPERVISORY_LEGAL_FLAG	SPARM	TKMISC
N/A-SWABIQ	3.142	3.0-42	DSITEQ	DSCPRT	Ti	SENSOR_DEP_FOR_SWAB	KBD	
N/A-SYSLVQ	2.1	2.0-1	TI	DOP	i	CURRENT_SYSTEM_LEVEL	SPARM	
N/A-SYCDQ	3.40	3.0-11	DSITEQ	SCTI	Ti	INIT_SELCT_I_BEACON	IPY	
N/A-TIEPQ	7.6.3	7.0-46						

N/A-TAFNQ	3.67	3.0-27		MSITEQ					TA	NO_TRACK_FILE_CTS	TRACK		
N/A-TAQ	2.93	2.0-17											
C TABBQ			TI	MSITEQ					I	DMDS_TAB_B_WORD_DISP_TIME	DISP	TKMISC	
N/A-TAB1T	2.165	2.0-40											
N/A-TAB2T	2.165	2.0-40											
N/A-TAB3T	2.165	2.0-40											
N/A-TAB4T	2.165	2.0-40											
C TADAQIQ	3.81	3.0-30	DSITEQ	AQLRCT TRACK					TI	DISPLAY_CONFIG_TYPE.TADAQDQ	DISP	TTDISP	
N/A-TADRNGIQ	3.80	3.0-30	DSITEQ	AQLRNGT					TI	TRACK_ADAPTED_RANGE	SPABM		
N/A-TALSECQ	2.128	2.0-30	TI						I	TRK_DUMPGM_ALT_TRK	TRACK		
N/A-TANCAQ	2.38	2.0-7											
N/A-TAPIQ	3.91	3.0-32	MSITEQ	MSAW MSAW2	MSMOVE	MTGA	MTGCT		TI	TOTAL_NO_APPROACH	ETG		
N/A-TAQ		2.0-17	TI	CATU CDB	CDBD	COMA	COMB		I	TI_CODE_A			
N/A-TAQ		2.0-17	TI	DOP IPI	IPO	KIP	KIPM						
N/A-TAQ		2.0-17	TI	KOPA KOPB	KOPC	MSAW	MSAWQ						
N/A-TAQ		2.0-17	TI	MSAW2Q MSAW3Q	MSAW4Q	MSITEQ	MTP						
N/A-TAQ		2.0-17	TI	PDOP RDBMD	SDB2	TRAD							
N/A-TASQ	3.68	3.0-27											
N/A-TASTLGTH	3.79	3.0-29	MSITEQ	CRIT	CRITD				I	CRIT_LNGTH_SIG_TIME_PER_DATA	CRIT		
N/A-TASTQ			TI	COMA COMB	IPI	KOPA	KOPB		I	TI_CODE_ASTERISK	SPABM		
C TBBSQ	2.3	2.0-2	TI	KOPA KOPB	KOPC				C	TRACKBALL_BIN_SIZE	KBD	TKTRKPRM	
N/A-TBCNTQ	2.102	2.0-18	TI	TBCNT						NO_BEMS_BTWN_ERRORS_M	TRACK		
N/A-TBPSIZ	2.121	2.0-21	TI	CRIT SDB2					I	MEM_TBPRET_KBD_NO_WORDS	KBD		
N/A-TBQ		2.0-17	TI	CDBD COMA	KOPA	KOPB	MSAWQ		I	TI_CODE_B			
N/A-TBQ		2.0-17	TI	MSAW2Q MSAW3Q	MSAW4Q	MSITEQ	PDOP						
N/A-TBQ		2.0-17	TI	SDB1 SDB2									
N/A-TCARQ			II						I	TI_CODE_CARET			
N/A-TCASECQ			TI						I	SCTR_TRK_CA	TRACK		
C TCFCQ	3.54.7	1.0-17	TSITEQ	IPI KOPA KOPC TSUB0 TSUB1					I	TBL_1_ARR_TRK_FRNTPNT	TRACK	TKTRKPRM	
C TCFCIQ	3.54.23	1.0-18	TSITEQ	TPRED					I	TBL_1_LIST_ARR_TRK_FRNTPNT	SPABM	TKTRKPRM	
C TCIDQ	3.30	3.0-28	MSITEQ	CRIT CRITD IDAT IPI IPO					I	MAX_TRACK_FILES_N_ONE_IPI	TRACK	TKMISC	
N/A-TCNQ			TI						I	MTRK_TCN	TRACK		
N/A-TCPERQ			TI						I	TI_CODE_CENTER[illegible]	SPABM		
N/A-TCQ		2.0-17	TI	CDB CDBD	COMA	COMB	DOP		I	TI_CODE_C			
N/A-TCQ		2.0-17	TI	IPO KIP	KOPA	KOPB	KOPC						
N/A-TCQ		2.0-17	TI	MSAWQ MSAW2Q	MSAW3Q	MSAW4Q	MSITEQ						
N/A-TCQ		2.0-17	TI	*PDOP RDBMD RKIP*	SDB2	TRAD							
N/A-TCRQ			TI	COMA COMB IPO	KIP	KIPM			I	TI_CODE_LPREED_[illegible]			
N/A-TCRQ			TI	KOPA KOPB KOPC	MPEB	MSITEQ							
N/A-TCUQ			TI	PDOP RDBMD RKIP	SDB1	SDB2							
N/A-TCRQ			TI	TPRED TRAD									
C TCRSECQ	2.128	2.0-29	TI	TCBSS					I	SCTR_TRK_IRRF	TRACK	TKTRKPRM	
N/A-TDARQ			TI						I	TI_CODE_DOWN_ARROW	SPABM		
N/A-TDNDQ			TI						I	TI_CODE_DIAMOND	SPABM		
N/A-TDQ		2.0-17	TI	CDB CDBD COMA	COMB	IPO			I	TI_CODE_D			
N/A-TDQ		2.0-17	TI	KIP KIPM KOPA	KOPB	KOPC							
N/A-TDQ		2.0-17	TI	MSAWQ MSAW2Q	MSAW3Q	MSAW4Q	MSITEQ						
N/A-TDQ		2.0-17	TI	RDBMD SDB1 SDB2									
C TEBA			MSITEQ						I	TEB_ABR_AIRPORT_2	IPI	TKAPTID	
C TEBD		MSITEQ							I	TEB_DEPT_AIRPORT_1	IPI	TKAPTID	
N/A-TECTQ	2.128	2.0-33								(and TCBCTQ)			
N/A-TEDCQ		3.5.2-1	SYSEQU	SYSEQ1	SYSEQ2	TEDCRS	TPSEC		I	TED[illegible]_SYS	SPABM		
C TEDSECQ	2.128	2.0-29	TI	TEDC					I	SCTR_TRK_DSC_CORR	TRACK	TKTRKPRM	
C TEDTOQ	2.163	2.0-36	TI	TEDC					tim	SCTR_TRK_TEDC_TMOUT	TRACK	TKTRKPRM	
N/A-TEOMQ			TI						I	TI_CODE_EOM	SPABM		

```
N/A-TEQ                                2.0-17  TI      COMA DOP IPI      KIPM     KOPA      i  TI_CODE_E
N/A-TEQ                                2.0-17  TI      KOPB KOPC MSAWQ   MSAW2Q   MSAW3Q
N/A-TEQ                                2.0-17  TI      MSAW4Q MSITEQ PDOP BDBMD   SDB1
N/A-TEQ                                2.0-17  TI      SDB2
N/A-TE2UQ                                      TI
N/A-TFIQ                       3.69    3.0-28  MSITEQ  TRKXT     SDB1RO                   i  TI_CDE_EQUAL_SIGN
N/A-TFKXXQ                                     MSITEQ  SDB1RO                             Ti CURRENT_NO_TRACK_FILE_CTS      TRACK
N/A-TFQ                                2.0-17  TI      CORD COMA COMB    IPI      IPO     Ti TRACK_FILE_RUN_TOT_NO          TRACK
N/A-TFQ                                2.0-17  TI      KIP KOPA KOPB     KOPC     MSAW3Q  i  TI_CODE_F
N/A-TFQ                                2.0-17  TI      MSITEQ PDOP BDBMD RKIP  SDB1  SDB2
N/A-TGCRQ                                      TI      SDB2
N/A-TGQ                                2.0-17  TI      KOPA KOPB KOPC    MSAWQ    MSAW2Q  i  TI_CDE_CARRIG_RTRN
N/A-TGQ                                2.0-17  TI      MSAW3Q MSAW4Q MSITEQ BDBMD SDB2  i  TI_CODE_G
N/A-TGSAQ                      2.126   2.0-27  TI                                       i  MTRK_TGSA
N/A-TGSLQ                      2.126   2.0-27  TI                                       i  MTRK_TGSL                         TRACK
N/A-THD                                                                                    CTS_THREAD_POINTER_BACBO          TRACK
N/A-THEXQ                                      TI                                   i  TI_CDE_HEXAGON                    TRACK
N/A-THQ                                2.0-17  TI      COMA IPI IPO      KIP      KOPA    i  TI_CODE_H
N/A-THQ                                2.0-17  TI      KOPB KOPC MSAW3Q  MSITEQ   PDOP
N/A-THQ                                2.0-17  TI      BDBMD SDB2
N/A-THREDX                                     TI      CALTO CDR COMS    KOPA     PAUS    i  CTS_REPS_SIZES_WORD_36           SPARM
N/A-THREDX                                     TI      TCASD THAD TUD    TUDCA                                              SPARM
N/A-THRET                      2.165   2.0-38                                           i  SHIFT_INDEX_FOR_NO_TRACK
N/A-TIEMQ                      3.86    3.0-31  MSITEQ                                   T  TIMED_TABLE                      TRACK   TTTIMED
C   TIMSD                                                                                  SENSOR_TYPE.LIGHT_LOW_TARGET..    TRACK   TTSENSOR
N/A-TIMET                      2.165   2.0-37                                           i  SCTR_TRK_TIMIT_TMOUT              TRACK   TTSENSOR
C   TIMLIQ                     3.54.22 3.0-18  TSITEQ  TIRK                             i  TI_CODE_I                        TRACK   TKTRKPRM
C   TIMUIQ                     3.54.23 3.0-18  TSITEQ  TIRK
C   TINTJQ                                     TI      TINIT
N/A-TIQ                                2.0-17  TI      CORD COMA COMB    IPO      KIP     i  TI_CODE_J
N/A-TIQ                                2.0-17  TI      KIPM KOPA KOPB    KOPC     MSAWQ   i  TI_CODE_K
N/A-TJQ                                2.0-17  TI      MSAW2Q MSAW3Q MSITEQ BDBMD SDB2
N/A-TKQ                                2.0-17  TI      COMA MSITEQ PDOP  SDB2
N/A-TKQ                                2.0-17  TI      CORD IPO KIP      KOPA     KOPB    i  TI_CDE_LEFT_ARROW
N/A-TLAW2                                      TI      MSAW3Q MSITEQ BDBMD SDB2           i  TRA_PULL_DP
N/A-TLB                                3.5.2-1 SYSEQ0  MSITEQ   SYSEQ1   SYSEQ2   TTYD    i  TI_CODE_L                        SPARM
N/A-TLQ                                2.0-17  TI      COMA COMB DOP     IPO      KIP
N/A-TLQ                                2.0-17  TI      KOPA KOPB KOPC    MSAWQ    MSAW2Q
N/A-TLQ                                2.0-17  TI      MSAW3Q MSAW4Q MSITEQ BDBMD SDB1
N/A-TLQ                                2.0-17  TI      SDB2 TRAD
N/A-TMDFQ                      8.5.7   8.0-29
N/A-TMDF1Q                     8.5.6   8.0-23
N/A-TMINQ                                      TB
N/A-TMQ                                2.0-17  TI      CORD COMA IPO     KIP      KOPA    i  TI_CDE_MINUS
N/A-TMQ                                2.0-17  TI      KOPB KOPC MSAWQ   MSAW2Q   MSAW3Q  i  TI_CODE_M
N/A-TMQ                                2.0-17  TI      MSAW4Q MSITEQ PDOP BDBMD   RKIP
N/A-TMQ                                2.0-17  TI      SDB2
N/A-TMSSECQ                    2.128   2.0-30  TI      MSAW
N/A-TMMSIQ                     2.126   2.0-26  TI      AUT BBATS CATU    CDR      COMA    i  SCTR_TRK_MSAW                     TRACK
N/A-TMMSIQ                     2.126   2.0-26  TI      COMC IPI KOPA     KOPB     KOPC    i  MTRK_TRK_NUM_MASK                 SPARM
N/A-TMMSIQ                     2.126   2.0-26  TI      MSAW QLOOK SCTME  SLINK    SKABS                                     SPARM
N/A-TMMSIQ                     2.126   2.0-26  TI      TDOP TEDCRS TIMIT TPRED    TPSEC                                     SPARM
N/A-TMMSIQ                     2.126   2.0-26  TI      TPUR TRAD TMOUT   TSUBO    TSUBI                                     SPARM
N/A-TMMSIQ                     2.126   2.0-26  TI      TUD TUDS                                                             SPARM
```

```
N/A-TMMS2Q      2.126     2.0-26  TI       AUT BRATS COMA     CBIT     IPI      1   MTRK_FIELD_MASK                SPARM
N/A-TMMS2Q      2.126     2.0-26  TI       IPO KOPA KOPB      KOPC     MTGA                                        SPARM
N/A-TMMS2Q      2.126     2.0-26  TI       MTGCT PDOP SCTME   SD92     SLINK                                       SPARM
N/A-TMMS2Q      2.126     2.0-26  TI       SMOTH TDOP TINIT   TPRED    TPSEC                                       SPARM
N/A-TMMS2Q      2.126     2.0-26  TI       TPUR TSUB0 TUD     TUDS                                                 SPARM
N/A-TNPT        2.165     2.0-38
N/A-TNQ                   2.0-17  TI       CATU CDRD COMA     COMB     IPI      1   TI_CODE_N
N/A-TNQ                   2.0-17  TI       KIPB KOPA KOPB     KOPC     MSAWQ
N/A-TNQ                   2.0-17  TI       MSAW2Q MSAW3Q MSAW4Q MSITEQ PDOP
N/A-TNQ                   2.0-17  TI       RDBMD SDB2
N/A-TNT         2.165     2.0-38
N/A-TOCIMQ      8.2.12    8.0-7
N/A-TOMIMQ      8.2.13    8.0-8
N/A-TOQ                   2.0-17  TI       COMA COMB IPO      KIP      KIPM     1   TI_CODE_O
N/A-TOQ                   2.0-17  TI       KOPA KOPB KOPC     MSAW3Q   MSAW4Q
N/A-TOQ                   2.0-17  TI       SDB1 SDB2
N/A-TORAIQ      7.6.6     7.0-47
N/A-TPADQ                         TI       CDR COMA COMB      DOP      IPI      1   TI_CDE_PAD
N/A-TPADQ                         TI       IPO KIP  KIPM      KOPA     KOPB
N/A-TPADQ                         TI       KOPC MAT MPER      MSITEQ   MTP
N/A-TPADQ                         TI       PDOP RCOMM RDBMD   RDOP     RKIP
N/A-TPADQ                         TI       SDB1 SDB2 TPRED    TRAD
C   TPDSECQ     2.128     2.0-29  TI       BRATS MTGA MTGCT   TPRED                1   SCTR_TRK_PREDICTION        TRACK    TKTRKPRM
N/A-TPERQ                         TI       IPI IPO  KIP       KOPA     KOPB       1   TI_CDE_PERIOD
N/A-TPERQ                         TI       KOPC MSITEQ RKIP   SDB2
N/A-TPLUSQ                        TI       COMA COMB IPI      KOPB     KOPC       1   TI_CDE_PLUS
N/A-TPQ                   2.0-17  TI       IPI IPO  KIP       KIPM     KOPA       1   TI_CODE_P
N/A-TPQ                   2.0-17  TI       KOPB KOPC MSAW3Q   RDBMD    SDB2
C   TPRSECQ     2.128     2.0-29  TI       TPUR                                    1   SCTR_TRK_PROC_UP_REP       TRACK    TKTRKPRM
C   TPSSECQ     2.128     2.0-29  TI       TPSEC                                   1   SCTR_TRK_PRISC_COMM        TRACK    TKTRKPRM
N/A-TQ          3.3       3.0-1   MSITEQ   CTS  SDB1 SDB1RQ SDB2 TTYD             1   TOT_TRACK_SLOTS            SPARM
C   TQK1                                                                          1   TRIAL_TRACK_NUMBER_MAX     TRACK    TKTRKPRM
C   TQK2                                                                          1   NORMAL_TRACK_NUMBER_MAX    TRACK    TKTRKPRM
N/A-TQQ                   2.0-17  TI       SDB2                                    1   TI_CODE_Q
N/A-TRANQ                         TI                                               1   TI_CDE_RIGHT_ARROW
N/A-TRING                         TI       KOPC RDBMD
N/A-TRIMGQ                        TI       COMA COMB IPI      KOPA     KOPB       1   TI_CDE_TRIANGLE
N/A-TRNGIQ      3.110     3.0-39  MSITEQ   ATRNGD
N/A-TRQ                   2.0-17  TI       CDRD COMA COMB     DOP      IPI        1   TI_CODE_R
N/A-TRQ                   2.0-17  TI       IPO KIP  KIPM      KOPA     KOPB
N/A-TRQ                   2.0-17  TI       KOPC MSAW3Q MSAW4Q MSITEQ   PDOP
N/A-TRQ                   2.0-17  TI       RDBMD SDB1 SDB2
C   TRS1Q       3.88      3.0-31  TSITEQ   MTGCT SDB1 SDB1RQ  SDB2                1   SENSE_TYPE_NO_REPORT       SPARM    TTSENSOR
C   TRSSECQ     2.128     2.0-29  TI       TROUT                                   1   PASS1_SCTR_TRK_DISP        TRACK    TKTRKPRM
C   TRSSEC2Q    2.128     2.0-29  TI       TROUT                                   1   PASS2_SCTR_TRK_DISP        TRACK    TKTRKPRM
C   TRSSEC3Q    2.128     2.0-29  TI       TROUT                                   1   PASS3_SCTR_TRK_DISP        TRACK    TKTRKPRM
C   TRSSEC4Q                  2.0-29  TI       TROUT                                   1   PASS4_SCTR_TRK_DISP        TRACK    TKTRKPRM
N/A-TRSMS1Q     2.126     2.0-26  TI       TPSEC                                   1   MTRK_TRST_INDX_MASK        TRACK
N/A-TRSMS2Q     2.126     2.0-26  TI       TPSEC SMOTH                             1   MTRK_TRST_FIELD_MASK       TRACK
C   TRSTAQ      3.74      3.0-28  TSITEQ   PSRAP                                   1   SENSE_TYPE_TRS_SIZE        SPARM    TTSENSOR
N/A-TRVL1Q                        TI                                               1   MTRK_TRVL1                 TRACK
N/A-TRVL2Q                        TI                                               1   MTRK_TRVL2                 TRACK
N/A-TSAFQ                         TI       KOPC PDOP SDB1                                                        SPARM
N/A-TSBQ                          TI       COMA PDOP TRAD                          1   TI_CDE_START_BLINK
C   TSECTQ                        TI       TROUT                                   1   SCTR_TRK_TROUT_SECS        TRACK    TKTRKPRM
```

```
N/A-TSEPQ                          TI                                                  i   TI_CDE_SEP
N/A-TSPCQ                          TI       CATU COMA COMB     DOP       IFI           i   TI_CDE_SPACE
N/A-TSPCQ                          TI       IFO KIP  KIPM     KOPA      KOPB
N/A-TSPCQ                          TI       KOPC MAT MPEB     MTP       PDOP
N/A-TSPCQ                          TI       RDBMD RKIP SCTME  SDB1      SDB2
N/A-TSPCQ                          TI       TPBED TRAD
N/A-TSPLQ                          TI                                                  i   TI_CHAR_CODE_SMALL_PLUS
N/A-TSQ                 2.0-17     TI       COMA COMB IFO     KIP       KIPM          i   TI_CODE_S
N/A-TSQ                 2.0-17     TI       KOPA KOPB KOPC    MSAWQ     MSAW2Q
N/A-TSQ                 2.0-17     TI       MSAW3Q MSAW4Q MSITEQ PDOP   RDBMD
N/A-TSQ                 2.0-17     TI       SDB1 SDB2
N/A-TSQQ                           TI       COMB LIMD PDOP    SDB1                  i   TI_CDE_SQUARE
N/A-TSTKYQ      3.77.2  3.0-29     MSITEQ   TSTKY
N/A-TSWSECQ     2.128   2.0-30     TI                                                  i   SCT_TRK_SWABS                  TRACK
C   TTDQ        3.39    3.0-11     DSITEQ   ALFLT                                      TA  DISPLAY_CONFIG_TYPE.TTDQ    DISP      TTDISP
N/A-TTCAPQ      3.87    3.0-31     TSITEQ   COMA                                       i   NO_TRK_LEFT_BEFORE_PURG    TRACK
N/A-TTCNQ                          TI                                                  i   MTRK_TTCN                  TRACK
N/A-TTGT                3.5.2-2    SYSEQ0   KOPB KOPC  PDOP      PSRAP     SDB1      i   TEST_TARGET_DISP           SPARM
N/A-TTGT                3.5.2-2    SYSEQ0   SYSEQ1 SYSEQ2 TTYD                         i                              SPARM
C   TTISECQ     2.128   2.0-29     TI       TINIT                                      i   SCTB_TRK_INITIAL           TRACK     TRTRKPRM
N/A-TTQ                 2.0-17     TI       CORD COMA     COMB      DOP       IFI       i   TI_CODE_T
N/A-TTQ                 2.0-17     TI       IFO KIP  KIPM     KOPA      KOPB
N/A-TTQ                 2.0-17     TI       KOPC MSAW3Q MSAW4Q MSITEQ  PDOP
N/A-TTQ                 2.0-17     TI       RDBMD RKIP SDB1   SDB2
N/A-TUARQ                          TI                                                  i   TI_CDE_UP_ARROW
N/A-TUBARQ                         TI                                                  i   TRI_TI_CDE_UNDRBAR
N/A-TUBXQ                          TI                                                  i   BOX_TI_CDE_UNDRBAR
N/A-TUCRQ                          TI       TRAD                                       i   TI_CDE_UPEED_CRG_RTN
N/A-TUQ                 2.0-17     TI       IFI KIPM KOPA     KOPB      KOPC      i   TI_CODE_U
N/A-TUQ                 2.0-17     TI       MSITEQ RDBMD SDB2
N/A-TURNPQ      8.5.9   8.0-24
N/A-TVIRGQ                         TI       COMB DOP IFI      KOPA      KOPB      i   TI_CDE_VIRGULE
N/A-TVIRGQ                         TI       KOPC RDBMD SDB2   TRAD
N/A-TVQ                 2.0-17     TI       COMA COMB IFI     KOPB      MSAWQ     i   TI_CODE_V
N/A-TVQ                 2.0-17     TI       MSAW2Q MSAW3Q MSAW4Q MSITEQ SDB1
N/A-TVQ                 2.0-17     TI       SDB2
N/A-TWALIQ      7.0.7   7.0-47
N/A-TWDQ                           TI       KOPA KOPB KOPC    MPEB      MTGA      i   MEM_TBRDOUT_BUFF_WORDS     KBD
N/A-TWDQ                           TI       MTGCT SDB2                              i   MEM_TBRDOUT_BUFF_WORDS     KBD
N/A-TWQ                 2.0-17     TI       IFI KOPA MSAWQ    MSAW2Q    MSAW3Q    i   TI_CODE_W
N/A-TWQ                 2.0-17     TI       MASW4Q MSITEQ SDB2
C   TXIJQ       3.5     3.0-1      MSITEQ   TRAYIP TRNIT SDB1RO SDB2                Ti  SENSOR_DIFF.DELTA_X       SPARM     TTSENSOB
N/A-TXQ                 2.0-17     TI       CATU COMA KOPB    MSITEQ    SDB2      i   TI_CODE_X
C   TYIJQ       3.5     3.0-1      MSITEQ   TRAYIP TRNIT SDB1RO SDB2                Ti  SENSOR_DIFF.DELTA_Y       SPARM     TTSENSOR
C   TYPDISPIQ   3.62    3.0-15     MSITEQ   TYP      SDB2                           Ti  FORCE_TYPE_DISP          SPARM     TRMISC
C   TYPDISIIQ   3.51    3.0-15     MSITEQ   TYI      SDB2                           Ti  SENSOR_TYPE.RANGE_TYPE_DISP..  SPARM  TTSENSOB
N/A-TYQ                 2.0-17     TI       MSAW3Q MSAW4Q MSITEQ SDB2
N/A-TYQ                 2.0-17     TI       IFO KIP  KOPA     MSAWQ     MSAW2Q    i   TI_CODE_Y
C   TYSECQ      3.54.14 3.0-18     MSITEQ   KOPA                                       i   NO_SCANS_DISP_AIRCRAFT_TYPE    SPARM     TTMISC
N/A-TZMQ        8.3.8   8.0-12
N/A-TZQ                 2.0-17     TI       CATU COMA IFI     KOPA      KOPB      i   TI_CODE_Z
N/A-TZQ                 2.0-17     TI       KOPC MSAW MSITEQ  SDB2
N/A-TOPNQ       3.67    3.0-27
N/A-TOQ                 2.0-17     TI       KOPA KOPB KOPC    MSAW      MSAWQ     i   TI_CODE_O
N/A-TOQ                 2.0-17     TI       MSAW2Q MSAW3Q MSAW4Q MSITEQ SDB2
```

```
C   T1ADAQ1Q   3.81     3.0-30  DSITEQ   AQLR2T                                          T1  DISPLAY_CONFIG_TYPE.TADAQDQ   DISP    TTDISP
N/A-T1PNQ                          MSITEQ                                                A   NO_TRACK_FILE_CTS_1           TRACK
N/A-T2LB                   3.5.2-1 SYSEQ0   KOPB MSITEQ MTGCT   PSBAP    SDBTRQ     I   TRA_LVL1_BKUP                 SPARM
N/A-T1LB                   3.5.2-1 SYSEQ0   SYSEQ1 SYSEQ2 TI    TTYD                   I                                 SPARM
N/A-T1Q                            2.0-17  TI       KOPB KOPC MSAWQ   MSAW2Q   MSAW3Q     I   CTS_1_CURRENT_NO_TRACK_FILE   TRACK
N/A-T1Q                            2.0-17  TI       MSAW4Q MSITEQ PDOP SDB2                 I   TI_CODE_1
N/A-T1QPNQ                         MSITEQ                                                A   CTS_10_CURRENT_NO_TRACK_FILE  TRACK
N/A-T11PNQ                         MSITEQ                                                A   CTS_11_CURRENT_NO_TRACK_FILE  TRACK
N/A-T12PNQ                         MSITEQ                                                A   CTS_12_CURRENT_NO_TRACK_FILE  TRACK
N/A-T13PNQ                         MSITEQ                                                A   CTC_13_CURRENT_NO_TRACK_FILE  TRACK
N/A-T14PNQ                         MSITEQ                                                A   CTS_14_CURRENT_NO_TRACK_FILE  TRACK
N/A-T15PNQ                         MSITEQ                                                A   CTS_15_CURRENT_NO_TRACK_FILE  TRACK
N/A-T16PNQ                         MSITEQ                                                A   CTS_16_CURRENT_NO_TRACK_FILE  TRACK
N/A-T17PNQ                         MSITEQ                                                A   CTS_17_CURRENT_NO_TRACK_FILE  TRACK
N/A-T18PNQ                         MSITEQ                                                A   CTS_18_CURRENT_NO_TRACK_FILE  TRACK
N/A-T19PNQ                         MSITEQ                                                A   CTS_19_CURRENT_NO_TRACK_FILE  TRACK
C   T2ADAQ1Q   3.81     3.0-30  DSITEQ   AQLR3T                                          T1  DISPLAY_CONFIG_TYPE.TADAQDQ   DISP    TTDISP
N/A-T2PNQ                          MSITEQ                                                A   CTS_2_CURRENT_NO_TRACK_FILE   TRACK
N/A-T2LB                   3.5.2-2 SYSEQ0   TTYD DOP MSITEQ SYSEQ1 SYSEQ2 TI        I   TRA_LVL2_BKUP                 SPARM
N/A-T2PSEQ 8.2.11  8.0-6
N/A-T2Q                            2.0-17  TI       KOPB KOPC   MSAWQ    MSAW2Q   MSAW3Q  I   TI_CODE_2
N/A-T2Q                            2.0-17  TI       MSAW4Q MSITEQ PDOP   SDB2
N/A-T20PNQ                         MSITEQ                                                A   CTS_20_CURRENT_NO_TRACK_FILE  TRACK
N/A-T21PNQ                         MSITEQ                                                A   CTS_21_CURRENT_NO_TRACK_FILE  TRACK
N/A-T22PNQ                         MSITEQ                                                A   CTS_22_CURRENT_NO_TRACK_FILE  TRACK
N/A-T23PNQ                         MSITEQ                                                A   CTS_23_CURRENT_NO_TRACK_FILE  TRACK
N/A-T24PNQ                         MSITEQ                                                A   CTS_24_CURRENT_NO_TRACK_FILE  TRACK
C   T3ADAQ1Q   3.81     3.0-30  DSITEQ   QLRC4T                                          TI  DISPLAY_CONFIG_TYPE.TADAQDQ   DISP    TTDISP
N/A-T3ASEQ 7.3.1.15 7.0-37
N/A-T3PNQ                          MSITEQ                                                A   CTS_3_CURRENT_NO_TRACK_FILE   TRACK
N/A-T3LKAQ 7.3.1.16 7.0-38
N/A-T3LSEQ 7.3.1.17 7.0-38
N/A-T3PSEQ 7.3.1.18 7.0-39
N/A-T3Q                            2.0-17  TI       MSAWQ MSAW2Q MSAW3Q MSAW4Q MSITEQ      I   TI_CODE_3
N/A-T3Q                            2.0-17  TI       PDOP SDB2
N/A-T4PNQ                          MSITEQ                                                A   CTS_4_CURRENT_NO_TRACK_FILE   TRACK
N/A-T4Q                            2.0-17  TI       KOPB MSAWQ MSAW2Q MSAW3Q   MSAW4Q      I   TI_CODE_4
N/A-T4Q                            2.0-17  TI       MSITEQ PDOP SDB2
N/A-T5PNQ                          MSITEQ                                                A   CTS_5_CURRENT_NO_TRACK_FILE   TRACK
N/A-T5Q                            2.0-17  TI       KOPB KOPC MSAWQ   MSAW2Q   MSAW3Q      I   TI_CODE_5
N/A-T5Q                            2.0-17  TI       MSAW4Q MSITEQ PDOP SDB2
N/A-T6PNQ                          MSITEQ                                                A   CTS_6_CURRENT_NO_TRACK_FILE   TRACK
N/A-T6Q                            2.0-17  TI       SDB2 MSAWQ MSAW2Q MSAW3Q MSAW4Q MSIT EQ I   TI_CODE_6
N/A-T7PNQ                          MSITEQ                                                A   CTS_7_CURRENT_NO_TRACK_FILE   TRACK
N/A-T7Q                            2.0-17  TI       KOPA KOPB KOPC   MSAWQ    MSAW2Q      I   TI_CODE_7
N/A-T7Q                            2.0-17  TI       MSAW3Q MSAW4Q MSITEQ SDB2
N/A-T8PNQ                          MSITEQ                                                A   CTS_8_CURRENT_NO_TRACK_FILE   TRACK
N/A-T8Q                            2.0-17  TI       MSAWQ MSAW2Q MSAW3Q MSAW4Q MSITEQ      I   TI_CODE_8
N/A-T9PNQ                          MSITEQ                                                A   CTS_9_CURRENT_NO_TRACK_FILE   TRACK
N/A-T9Q                            2.0-17  TI       KOPB KOPC MSAWQ   MSAW2Q   MSAW3Q      I   TI_CODE_9
N/A-T9Q                            2.0-17  TI       MSAW4Q MSITEQ SDB2 TRAC
N/A-UCADVQ 2.51    2.0-16
C   ULAQ   3.54.2  3.0-16  TI       COMA                                                  I   ARTCC_UPR_TIME_DIF_DEP_ABIV_TRKIFT    TKTRKPRM
C   ULKQ   3.54.2  3.0-16  TI       COMA                                                  I   NOARI_UPR_TIME_DIF_DEP_ABIV_TRKIFT    TKTRKPRM
```

N/A-MB9	7.3.1.10	7.0-33								
N/A-MB9I1	7.1.1.11	7.0-8								
N/A-MB9I1J1	7.2.1.10	7.0-24								
N/A-XKQ	3.27	3.0-7	OSITEQ	SYMT	TABBT	TDPBET	PIXCVT	MRF	TA	KYB_ABR_DEP_PREV_LOC_PARAM	KBD
N/A-XXQ	2.94	2.0-17									
N/A-XALB1Q	7.6.4	7.0-46									
N/A-XASCIQ			TI						i	ASCI_CD_ALPHA_ADD	SPARM
N/A-XASTRQ			TI						i	ASCI_CD_ASTERISK	SPARM
N/A-XBLANQ			TI						i	ASCI_CD_BLANK	SPARM
N/A-XBQ			TI						i	ASCI_CD_B	SPARM
N/A-XCOLNQ			TI						i	ASCI_CD_COLON	SPARM
N/A-XCONAQ			TI						i	ASCI_CD_ALPHA_FROM_TI	SPARM
N/A-XCONNQ			TI						i	ASCI_CD_NUMERIC_FROM_TI	SPARM
N/A-XCONT	2.165	2.0-37									
N/A-XCQ			TI						i	ASCI_CD_C	SPARM
N/A-XCRQ			TI						i	ASCI_CD_CR	SPARM
N/A-XDECMQ			TI						i	ASCI_CD_DECIMAL	SPARM
N/A-XEQULQ			TI						i	ASCI_CD_EQUAL	SPARM
N/A-XLFQ			TI						i	ASCI_CD_LF	SPARM
N/A-XMINUQ			TI						i	ASCI_CD_MINUS	SPARM
N/A-XMQ			TI						i	ASCI_CD_M	SPARM
N/A-XNULQ			TI						i	ASCI_CD_NULL	SPARM
N/A-XONEQ			TI						i	ASCI_CD_ONE	SPARM
N/A-XPLUSQ			TI						i	ASCI_CD_PLUS	SPARM
N/A-XPQ			TI						i	ASCI_CD_P	SPARM
N/A-XRQ			TI						i	ASCI_CD_R	SPARM
N/A-XSIQ			TI						i	ASCI_CD_TTY_ENABLE	SPARM
N/A-XTQ			TI						i	ASCI_CD_T	SPARM
N/A-XVIRGQ			TI						i	ASCI_CD_VURGULE	SPARM
N/A-XYDIP1Q	3.17	3.0-4	MSITEQ	IDAT					TA	COORD_CONVER_FACTOR	IFT
N/A-XYDOT	2.165	2.0-37									
N/A-YALB1Q	7.6.5	7.0-46									
N/A-YCOBT	2.165	2.0-37									
N/A-ZM1P1Q	8.1.9	8.0-13									
N/A-ZM1P2Q	8.1.10	8.0-14									
N/A-ZONEQ	1.126	2.0-23	TI						i	MTRK_ZONE	TRACK

END

DATE

FILMED

4 88